SHARP SERVICE MANUAL

CODE: 00ZSF2050FM/E

No.1

MODEL SF-2050 SF-C52

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Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

[1] GENERAL DESCRIPTION

1. The SF-2050 is a high speed copier which allows copying of 50 sheets per minute, and first copy at the at the highest speed in the class with remarkable copying efficiency.
2. Target users

   Average copy volume: 20,000 ~ 25,000 sheets

   Scope: 10,000 ~ 60,000 sheets
3. Characteristics of the product
   (1) Improvements in the basic functions
   - First copy: 2.7 sec
   - Automatic duplex function (standard)
   - Large capacity tray (3 trays + LCC), max. 4,550 sheets (5,500 sheets in Japan)
     Improved efficiency in duplex copy (Single → duplex efficiency 75%)
   - RADF and the staple sorter are optionally available to provide higher copy productivity.

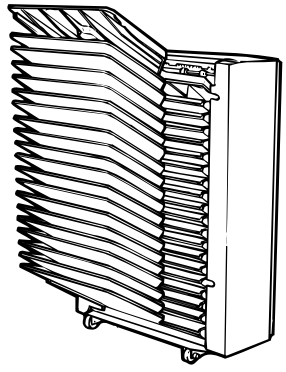
   (2) High copy volume
   - Console design
   - AICS (Active Image Control System) provided.
   - Non-stop/non-slow-down copy (Japan)
   - Toner supply during copying
   - Paper supply to a non-active tray during copying

   (3) Measures against environmental problems
   - Low noise (Conforming to Blue Angel standards.)
   - Low ozone 0.02mg/m or less
   - Low power consumption, 15% down from the conventional model (SF-9400)

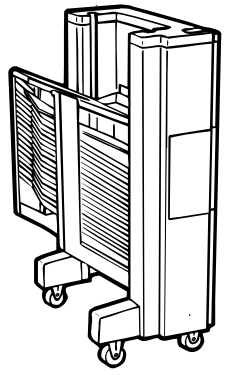
   (4) Improved manipulation
   - Front access structure
   - LCD display

   (5) Options
   - RADF: SF-A55 (New)
   - 20-bin sorter: SF-S16 (Used in the SD-2060)
   - 20-bin staple sorter: SF-S53 (Used in the SD-2060/SF-2035)
   - Large capacity tray (LCC): SF-C52 (New)
   - Card type counter: SF-EA11 (Used in the SD-2060/SF-2035)
   - Password type counter: SF-EA12 (Used in the SD-2060/SF-2035)
   - Personal counter: SF-71A/B

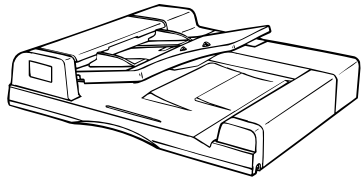
20-bin sorter (SF-S16)



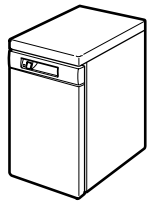
20-bin staple sorter (SF-S53)

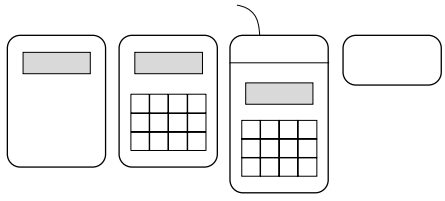


Duplex reversing automatic document feeder (SF-A55)



Large capacity tray (SF-C52)





Card type department control counter (SF-EA11)
Password type department control counter (SF-EA12)
Commander (SF-EA13)
Personal counter (SF-71A/B)

			SD-2050 Japan	SF-2050 US	SF-2050 EX1	SF-2050 EX2
No. of paper feed tray steps			4 trays (550)	3 trays (500)	3 trays (500)	3 trays (500)
Platen original size detection			○	×	×	×
RADF			Option	Standard	Option	Standard
LCC			Option (3,300)	Standard (3,000) (Shipped separately from the body)	Option (3,000)	Option (3,000)
Destination	Japan		○			
	SEC	AU		○		
	SECL	AL		○		
	SEEG	GG			○	
	SEEG	BG			○	
	SUK	BK			○	
	SCA	BA				○
	SCNZ	BE				○
	SRS	BE				○
	SRH	BE				○
	STCL	BE				○
	Agent	AE				○
	Agent	BE				○

[2] PRODUCT SPECIFICATIONS

1. Basic specifications

(1) Type: Console

(2) Copying system: Dry, electrostatic transfer system

(3) Original Kinds: Sheet, book, cubic

Max. original size	A3, 11 × 17
Original reference position	Center left
Detection	Japan, YES; outside Japan, NO
Detection size	A3, B4, A4, A4R, B5, B5R

Option	RADF (Standard except for Japan/SEEG/SUK)	
Original load capacity	50 sheets	
Original size	A3 ~ A5, 11 × 17 ~ 5.5 × 8.5	
Original replacement speed	50 sheets/min (A4, 8.5 × 11)	
Original weight (Excluding special paper)	Signal mode	(Japan) 35 ~ 128 g/cm^2
		(Outside Japan) 50 ~ 128 g/cm^2
	Duplex mode	(Japan) 50 ~ 110 g/cm^2
		(Outside Japan) 50 ~ 110 g/cm^2
Mixed original feed	Possible	

(4) Copying speed

	Normal	Reduction (50%)	Enlargement (200%)
A3	28	28	27
B4	32	30	31
A4 (Portrait)	50	43	36
A4 (Landscape)	39	37	36
B5 (Portrait)	50	48	36
B5 (Landscape)	39	37	36
11 × 17	28	28	27
8.5 × 14	32	30	31
8.5 × 11 (Portrait)	50	43	36
8.5 × 11 (Landscape)	39	37	36

(Note) The speeds at enlargement/reduction are at the magnification ratio of the lowest speed.

(5) First copy time about 2.7sec (paper feed port: tray 1)

First copy time at each paper feed port (sec)

Paper feed port	First copy time
Tray 1	2.7
Tray 2	2.9
Tray 3	3.1

Paper feed port	First copy time
Tray 4 (Japan only)	3.3
Manual feed	2.9
LCC	2.8

(6) Warm-up time

Japan	About 4 min
Outside Japan	About 3 min
Pre-heat	YES (Selected by the key operator program (P31).)
Jam recovery time	4 sec or less (Jam outside the fusing section)

(7) Multi copy: max. 999 sheets

(8) Copy magnification ratio

Fixed magnification ratio	AB series: 4R+4E: 200, 141, 122, 115, 100, 86, 81, 70, 50 % Inch series: 4R+4E: 200, 141, 129, 121, 100, 95, 77, 64, 50 %
Zoom range	50 ~ 200% (151 steps in 1% increment)

(9) Exposure

(9)-1 Exposure system: Slit exposure by moving the optical system (Fixed original table)

(9)-2 Exposure mode: Auto/Manual/Photo

(9)-3 Manual steps: 9 steps (Manual/Photo)

(10) Paper feed

(10)-1 Paper feed system: (Japan) 4 trays + multi manual feed
(Outside Japan) 3 trays + multi manual feed
(For SEC/SECL, LCC is a standard provision.)

(10)-2 Paper feed capacity: (Japan) 550 × 4 + 50
(Outside Japan) 500 × 3 + 50

(10)-3 Details of the paper feed section

AB series

Paper feed port	Paper feed capacity	Paper size	Paper weight	Size selection	Side/front
Tray 2	500 sheets (500 sheet in Japan)	A4, A4R, B5, B5R, B4, A3, (*A5)	52 ~ 80g/m^2, 14-21 lbs	Guide change is made by a serviceman.	Front/ drawer integrated
Tray 1 Tray 3 Tray 4 (Japan only)	500 sheets (550 sheets in Japan)	A4, A4R, B5, B5R, B4, A3	52 ~ 80 g/m^2, 14 ~ 21 lbs	Guide change is made by a serviceman.	Front-drawer integrated

Inch series

Paper feed port	Paper feed capacity	Paper size	Paper weight	Size selection	Side/front
Tray 2	500 sheets	8.5 × 11 8.5 × 11R 8.5 × 14 11 × 17 (∗8.5 × 5.5)	52-80g/m^2 14-21 lbs	Guide change is made by a serviceman.	Front/ drawer integrated
Tray 1 Tray 3	500 sheets	8.5 × 11 8.5 × 11R 8.5 × 14 11 × 17	52-80g/m^2 14-21 lbs	Guide change is made by a serviceman.	Front/ drawer integrated

∗ For A5 (8.5" × 5.5"), the rear edge guide is required.
8.8" × 13" is feedable.

Manual feed section

Paper size	AB series:	A3 ~ A6R
	Inch series:	11 × 17 ~ 5.5 × 8.5
Paper weight	Multi paper feed:	56 ~ 80 g/m^2, 15 ~ 21 lbs
	Single paper feed:	52 ~ 128 g/m^2, 15 ~ 21 lbs (When exceeding 104 g/m^2, A4 or smaller.)
Paper kinds	Standard paper, specified paper, special paper, OHP film, Postcard, etc,	
Detection size	(Japan) A3, A4, A4R, B4, B5, B5R	
	(Outside Japan AB series) A3, B4, A4, A4R, A5	
	(Outside Japan inch series) 11 × 17, 8.5 × 12, 8.5 × 11, 8.5 × 11R, 8.5 × 5.5	

(11) Developing system: Dry, two-component magnetic brush development

(12) Charging system: (–) DC saw teeth electrode system

(13) Transfer system: (–) DC corotron system

(14) Separation system: (–) AC corotron system

(15) Fusing system: Heat roller system

(16) Cleaning system: Counter blade system

(17) Light source: Halogen lamp

(18) Void width

Void area	Lead edge: 3mm or less
BAck surface void area	Rear edge: about 3mm
Image loss	Normal: 4mm or less

(19) Automatic duplex

Standard	
Size	Japan: A3, A4, A4R, B4, B5, B5R
	Outside Japan AB series: A3, A4, A4R, B4, B5
	Outside Japan inch series: 11 × 17, 8,5 × 14, 8.5 × 11, 8.5 × 11R
Capacity	50 sheets (all sizes)
Paper weight	56 ~ 80 g/m^2

(20) Paper exit/finishing

Paper exit tray capacity	250 sheets
Finishing	Option 20-bin sorter, 20-bin staple sorter

(21) Additional functions

Name	Function	Content
Automatic paper selection (APS)	Japan:	Yes
	Outside Japan:	Only with RADF
Automatic magnification selection (AMS)	Japan:	Yes
	Outside Japan:	Only with RADF During used of RADF, AMS by scanning in impossible. (PAT prevention)
Shift copy	YES	Shift width 9mm, 1/4 inch (adjustable)
Dual page copy	YES	Enlargement is impossible.
Edge erase	YES	Edge erase/center erase/edge and center erase
Center erase	YES	
Cover copy	YES	Covers/back covers/front and rear covers
Inserts copy	YES	
OHP inserts copy	YES	
Job memory	YES	9 kinds
Auditor	YES	50 departments
Key operator program	YES	
Communication features	YES	Bi-directional (The I/F PWB is a service parts.)
Process control	YES	
Toner save mode	YES	For SUK, toner save mode is not available. For Japan, serviceman mode selection.
Auto tray switching	YES	
Installed tray priority selection	YES	(PAT. prevention)
Pre-heating	YES	Switching by key operator program

(22) Power source

Voltage: 100V, 110V, 120V, 127V, 200V, 220V, 220 ~ 230V, 240V

Frequency: 50/60 Hz common

(23) Power consumption

Max. power consumption:

Japan, 1500W (with options);
Outside Japan, 1920W (with options)

(24) External view

W × D × H (mm)

750 × 660 × 950 (Glass top)

750 × 660 × 995 (OC cover top)

750 × 660 × 1137 (RADF top)

Occupying area W × D (mm)

1407 × 660 (with the paper exit tray, when the manual feed is open.)

Weight:

131 kg (Body only)

145 kg (with RADF)

(25) Accessories

Packed with the main body (supply parts only)	
OPC drum (installed to the body)	× 1
Developer	(1.0kg) × 1
Toner cartridge	(0.93kg) × 1
Upper/lower heat roller (installed to the body)	each × 1
Upper/lower fusing separation pawl (installed to the body)	each × 1
Upper/lower cleaning roller (lower cleaning roller: installed to the body)	each × 1
Cleaner blade (installed to the body)	× 1
Waste toner bottle (installed to the body)	× 1

2. Supply parts

① SEC

No.	Name	Content	Life	Product name	Packing
1	Drum	OPC drum × 1	200K	SF-250DR	10
2	Developer (Black)	Developer (1.0kg) × 10	100K × 10	SD-360MD	1
3	Toner (Black)	Toner cartridge (0.93kg) × 10	28K × 10	SD-360MT	1
4	Upper heat roller kit	Upper heat roller × 1 Fusing separation pawl (Upper) × 4 Fusing gear × 1	400K	SF-250UH	5
5	Lower heat roller kit	Lower heat roller × 1 Fusing separation pawl (Lower) × 4	200K	SF-250LH	5
6	Cleaner blade	Cleaner blade × 10	100K × 10	SD-360CB	1
7	Upper cleaning roller	Upper cleaning roller × 10	100K × 10	SF-250UR	1
8	Lower cleaning roller	Lower cleaning roller × 10	100K × 10	SF-250LR	1
9	Waster toner bottle	Waste toner bottle × 1	100K	SF-250TB	5
10	200K maintenance kit	SF-250CP × 5 (Drum separation pawl × 2) (Charging plate unit × 1) (CL side seal F/R × 1) (DV side seal F/R × 1) (Toner reception seal × 1)	200K	SF-250CK	1
11	Staple cartridge	Staple cartridge × 5	5000 × 5	SD-LS20	10

The screen grid (200K), the charger wire (200K), the ozone filter (400K), and the toner reception seal (200K) are service parts.

The waste toner bottle (100K), and charging plate unit (200K), and the DV seal (400K) are also available as service parts.

∗ The developer is in common with the SD-2060/3062. This model uses one bag (100K).

② SECL

No.	Name	Content	Life	Product name	Packing
1	Drum	OPC drum × 1	200K	SF-250DR	10
2	Developer (Black)	Developer (1.0kg) × 10	100K × 10	SD-360MD	1
3	Toner (Black)	Toner cartridge (0.93kg) × 10	28K × 10	SD-360MT	1
4	Upper heat roller kit	Upper heat roller × 1 Fusing separation pawl (Upper) × 4 Fusing gear × 1	400K	SF-250UH	5
5	Lower heat roller kit	Lower heat roller × 1 Fusing separation pawl (Lower) × 4	200K	SF-250LH	5
6	100K PM kit	Cleaner blade × 1 Waste toner bottle × 1 Upper cleaning roller × 1 Lower cleaning roller × 1	100K	SF-250KA	1
7	200K PM kit	Drum separation pawl × 2 Charging plate unit × 1 Screen grid × 1 CL side seal F/R × 1 DV side seal F/R × 1 Toner reception seal × 1	200K	SF-250KB	5
8	Staple cartridge	Staple cartridge × 5	5000 × 5	SD-LS20	10

∗ The developer is in common with the SD-2060/3062. This model uses one bag (100K).

③ SEEG/SUK

No.	Name	Content		Life	Product name	Packing
1	Drum	OPC drum	× 1	200K	SF-250DM	10
2	Developer (Black)	Developer (1.0kg)	× 10	100K × 10	SD-360LD	1
3	Toner (Black)	Toner cartridge (0.93kg)	× 10	28K × 10	SD-360LT	1
4	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper) Fusing gear	× 1 × 4 × 1	400K	SF-250UH	5
5	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	× 1 × 4	200K	SF-250LH	5
6	100K PM kit	Cleaner blade Waste toner bottle Upper cleaning roller Lower cleaning roller	× 1 × 1 × 1 × 1	100K	SF-250KA	1
7	200K PM kit	Drum separation pawl Charging plate unit Screen grid CL side seal F/R DV side seal F/R Toner reception seal	× 2 × 1 × 1 × 1 × 1 × 1	200K	SF-250KB	5
8	Staple cartridge	Staple cartridge	× 5	5000 × 5	SD-LS20	10

∗ The developer is in common with the SD-2060/3062. This model uses one bag (100K).

④ Asia, Middle/South America

No.	Name	Content		Life	Product name	Packing
1	Drum	OPC drum	× 1	200K	SF-250DR	10
2	Developer (Black)	Developer (1.0kg)	× 10	100K × 10	SD-360CD	1
3	Toner (Black)	Toner cartridge (0.93kg)	× 10	28K × 10	SD-360CT	1
4	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper) Fusing gear	× 1 × 4 × 1	400K	SF-250UH	5
5	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	× 1 × 4	200K	SF-250LH	5
6	100K PM kit	Cleaner blade Waste toner bottle Upper cleaning roller Lower cleaning roller	× 1 × 1 × 1 × 1	100K	SF-250KA	1
7	200K PM kit	Drum separation pawl Charging plate unit Screen grid CL side seal F/R DV side seal F/R Toner reception seal	× 2 × 1 × 1 × 1 × 1 × 1	200K	SF-250KB	5
8	Staple cartridge	Staple cartridge	× 5	5000 × 5	SD-LS20	10

∗ The developer is in common with the SD-2060/3062. This model uses one bag (100K).

⑤ SCA, SCNZ, Middle East, Africa

No.	Name	Content		Life	Product name	Packing
1	Drum	OPC drum	× 1	200K	SF-250DM	10
2	Developer (Black)	Developer (1.0kg)	× 10	100K × 10	SD-360LD	1
3	Toner (Black)	Toner cartridge (0.93kg)	× 10	28K × 10	SD-360LT	1
4	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper) Fusing gear	× 1 × 4 × 1	400K	SF-250UH	5
5	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	× 1 × 4	200K	SF-250LH	5
6	100K PM kit	Cleaner blade Waste toner bottle Upper cleaning roller Lower cleaning roller	× 1 × 1 × 1 × 1	100K	SF-250KA	1
7	200K PM kit	Drum separation pawl Charging plate unit Screen grid CL side seal F/R DV side seal F/R Toner reception seal	× 2 × 1 × 1 × 1 × 1 × 1	200K	SF-250KB	5
8	Staple cartridge	Staple cartridge	× 5	5000 × 5	SD-LS20	10

∗ The developer is in common with the SD-2060/3062. This model uses one bag (100K).

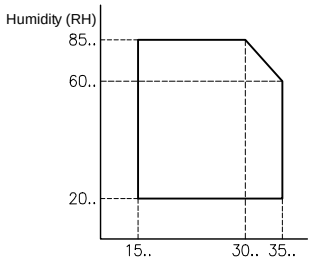
3. Environmental conditions

The following environmental conditions should be preserved for assuring copy quality and proper machine operations.

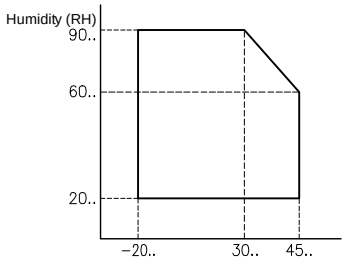
① Standard conditions

Temperature, 20 ~ 25 C; humidity, 65 ±5% RH

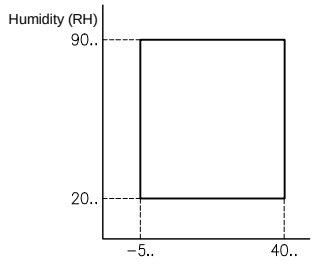
② Operational conditions



③ Transit conditions

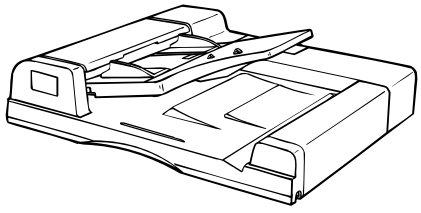


④ Supply store conditions



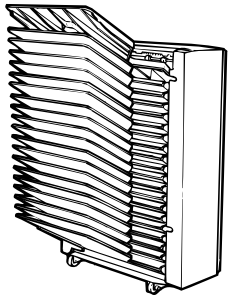
[3] OPTION SPECIFICATIONS

1. SF-A55



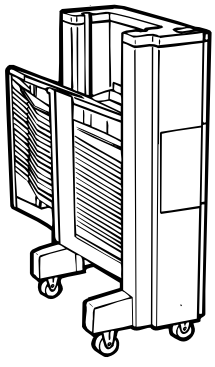
Name	Duplex reversing automatic document feeder
Document feed system	Continuous, automatic feed
Document exit system	Face up exit
Document transport system	One-belt, (center reference)
Document set direction	Face up
Document size	A3 ~ B5
Document weight	Thin paper mode, 35 ~ 50g/m^2; standard mode, 51 ~ 128g/m^2
Document set quantity	Max. 50 sheets (35 ~ 80g/m^2) (Max. 30 for A3 and 11" × 17")
Functions	Document reversing (Duplex documents), SDF/ADF mode selection, mixed paper feed, random paper feed
Power source	Supplied from the copier body.
Dimensions	595mm (W) × 525mm (D) × 130mm (H) (without tray)
Weight	About 150 kg

2. SF-S16



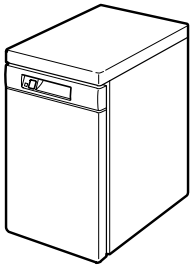
Name	20-bin sorter
No. of bins	20 bins
Storing system	Copy face up
Storing capacity of each bin	Max. 50 sheets (Top bin, 100 sheet) Collatable paper size/weight
Power source	Supplied from the copier body.
Dimensions	550mm (W) × 519mm (D) × 924m (H)
Weight	About 26.5kg

3. SF-S53



Name	Staple sorter
No. of bins	21 bins
Storing system	Face up
Storing capacity of each bin	Max. 50 sheets (Top bin, 250 sheet) Collatable paper size/weight
No. of sheets staplable	50 sheets (80g/m^2 paper)
Power source	Supplied from the copier body.
Dimensions	475mm (W) × 597mm (D) × 995mm (H)
Weight	About 42.1kg

4. SF-C52



Name	Large capacity cassette (LCC)
Paper feed capacity	3,000 sheets
Paper feed size	A4/B5
Paper weight	52 ~ 80g/m^2
Power source	Supplied from the copier body.
Dimensions	294mm (W) × 536mm (D) × 523mm (H)
Weight	26kg

[4] PAPER

1. Standard paper for tray feed

Name	Size	Type	Quanty in one bag
Standard type	A3	SF-3AS2	250 sheets
	B4	SF-4BS2	500 sheets
	A4	SF-4AS2	500 sheets
	B5	SF-5BS2 (Horizontal)	500 sheets each
		SF-5Bs3 (Vertical)	
	A5∗	SF-5AS2	250 sheets
	B6∗	SF-6BS2	250 sheets
General type paper (thick)	A3	SF-3AM2	250 sheets
	B4	SF-4BM3	500 sheets
	A4	SF-4AM2 (Horizontal)	500 sheets each
		SF-4AM3 (Vertical)	
	B5	SF-5BM2 (Horizontal)	500 sheets each
		SF-5BM3 (Vertical)	
Thick paper	A3	SF-3AH	250 sheets each
	B4	SF-4BH	
	A4	SF-4AH	
	B5	SF-5BH	
Recycled paper	A3	SF-3AR1	500 sheets each
	B4	SF-4BR1	
	A4	SF-4AR1	
	B5	SF-5BR1	
Color paper	B4	SF-4B1R (Pink)	500 sheets each
		SF-4B1B (Blue)	
		SF-4B1G (Green)	
	A4	SF-4A1R (Pink)	500 sheets each
		SF-4A1Y (Cream)	
		SF-4A1B (Blue)	
		SF-4A1G (Green)	
	B5	SF-5B1R (Pink)	500 sheets each
		SF-5B1Y (Cream)	
		SF-5B1B (Blue)	
		SF-5B1G (Green)	

● **<Note>** ● -

- Be sure to use the above paper on the tray. For the paper with mark "∗," use in the manual feed mode.

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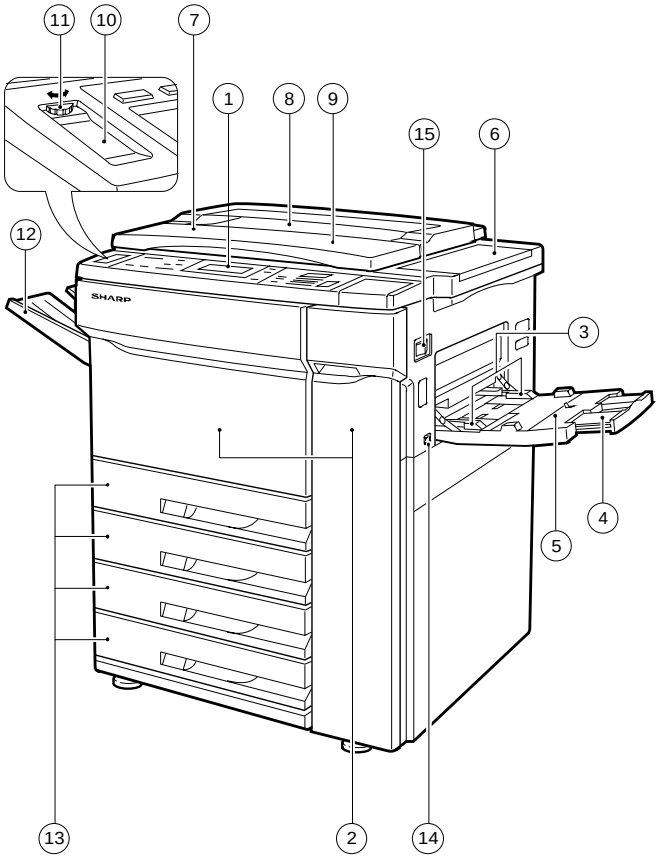
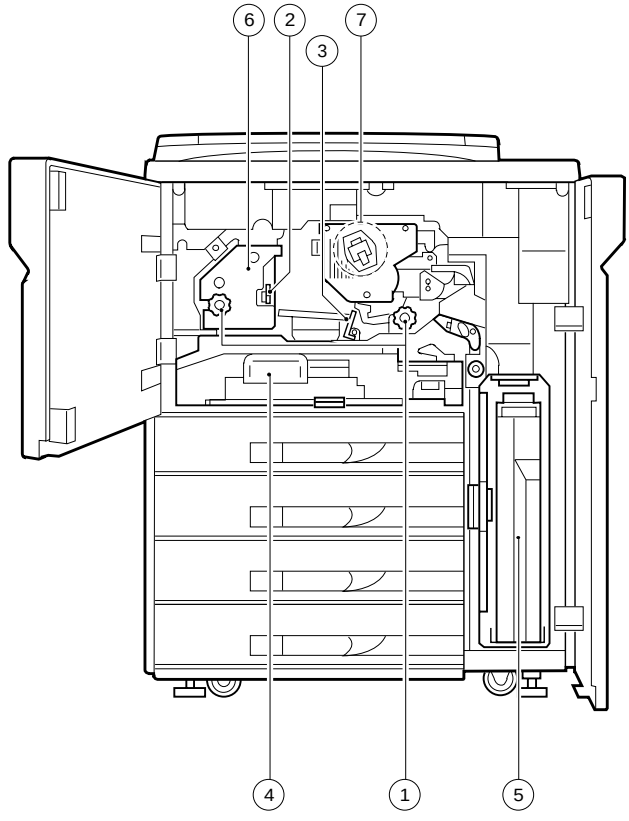
[5] PRODUCT VIEW

1. External view



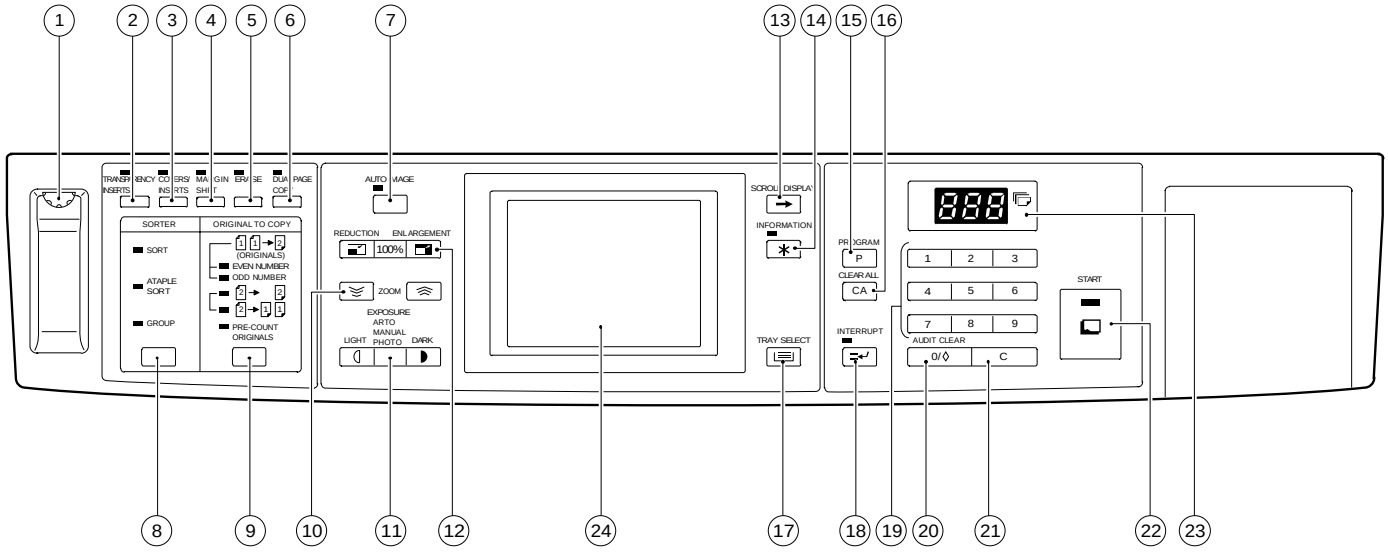
①	Operation panel	②	Front cover
③	Manual feed guide	④	Manual feed additional tray
⑤	Manual feed tray	⑥	Toner cover
⑦	Original cover	⑧	Original stocker
⑨	Original table	⑩	Clip tray
⑪	Contrast adjusting knob	⑫	Copy tray
⑬	Tray	⑭	Paper feed pressure release button
⑮	Power switch		

2. Internal view



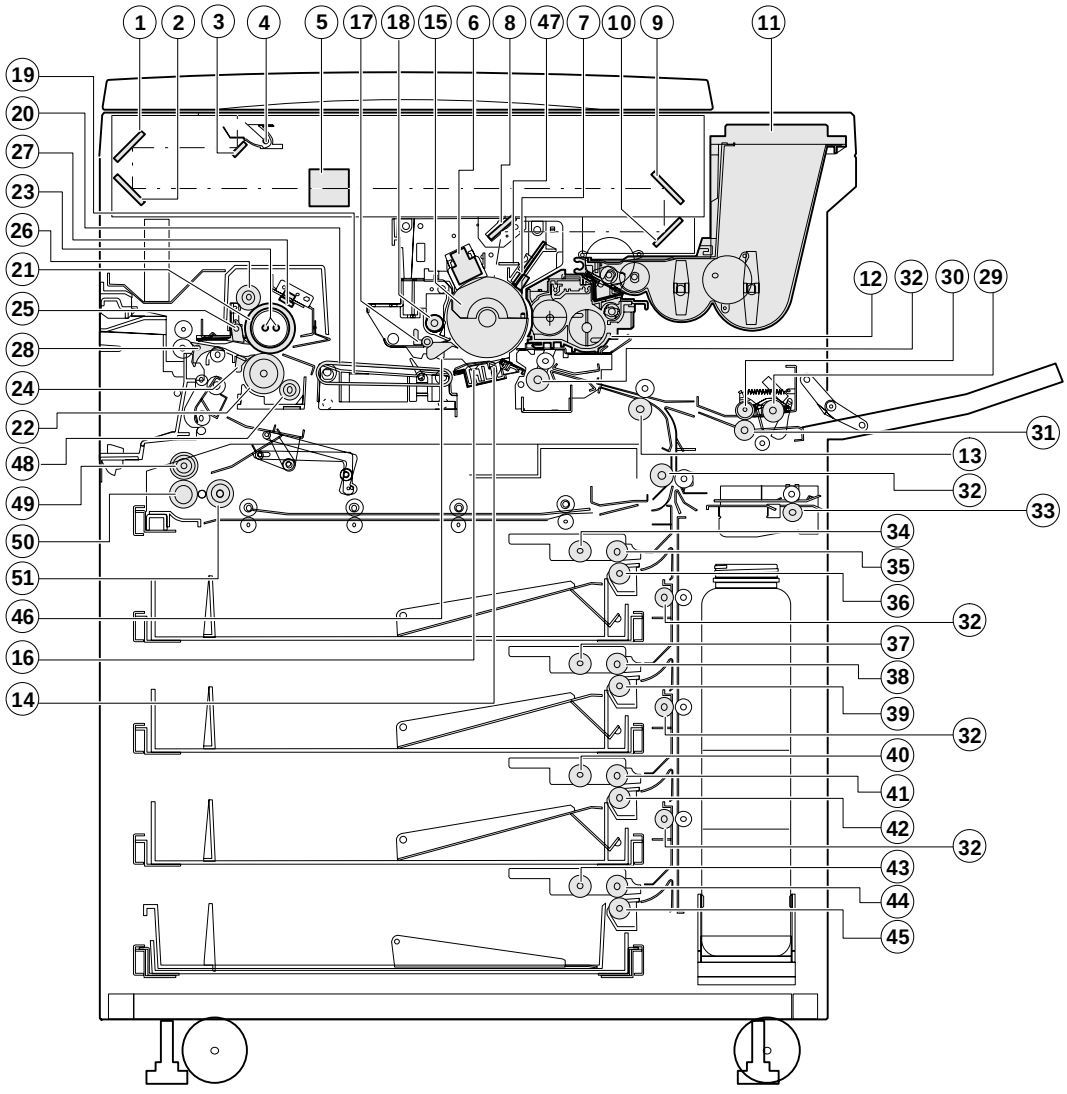
①	Roller rotation knob	②	Transport section adjustment knob
③	Transport section open/close lever	④	Duplex tray
⑤	Waste toner box	⑥	Fusing section
⑦	OPC drum		

3. Operation panel



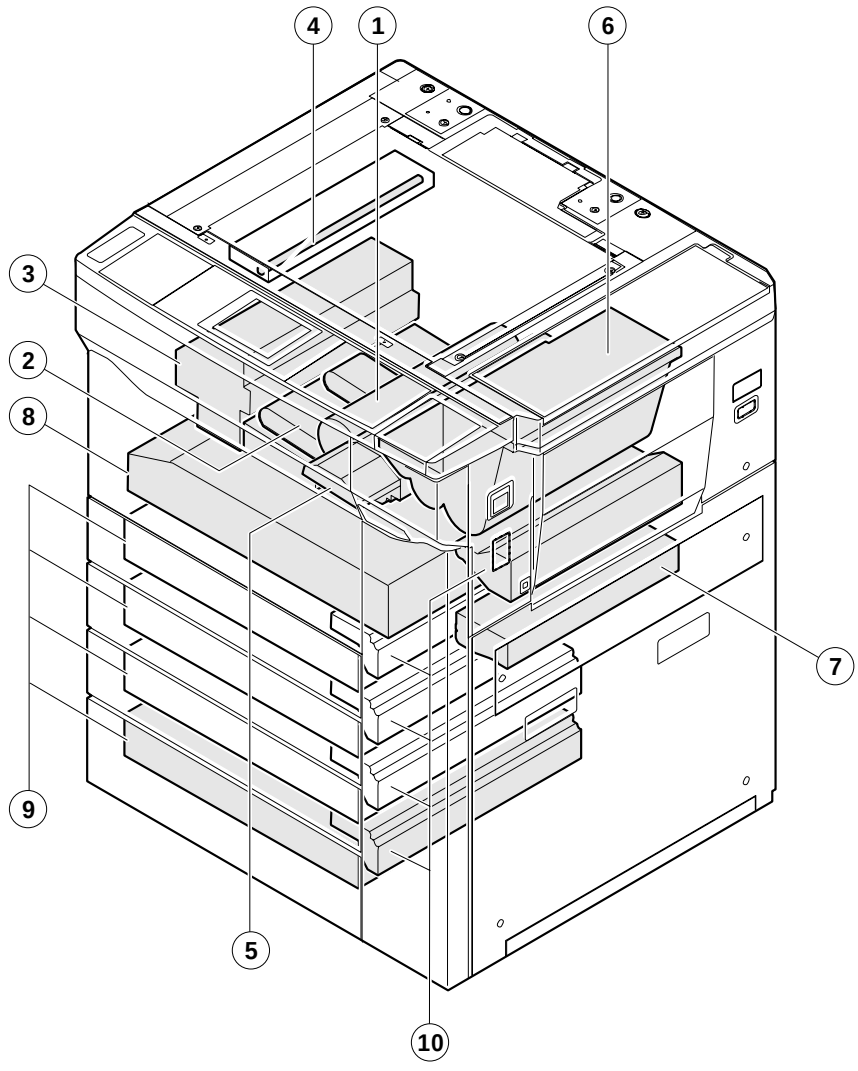
①	Contrast adjustment knob	②	OHP insert paper insertion key/display lamp	③	Cover/insert paper insertion key/display lamp	④	Shift key/display lamp
⑤	Edge erase key/display lamp	⑥	Dual paper copy key/display lamp	⑦	Automatic magnification ratio selection key/display lamp	⑧	Sort key/display lamp
⑨	Duplex key/display lamp	⑩	Zoom key	⑪	Copy density key	⑫	Reduction
⑬	Message forward scroll key	⑭	Operation guide key/display lamp	⑮	Program key	⑯	All clear key
⑰	Tray selection key	⑱	Interruption key/display lamp	⑲	Numeric key	⑳	Zero/department count end key
㉑	Clear (C) key	㉒	Start key/Start lamp	㉓	Copy quantity display	㉔	Message screen

4. Internal structure (Japan model)



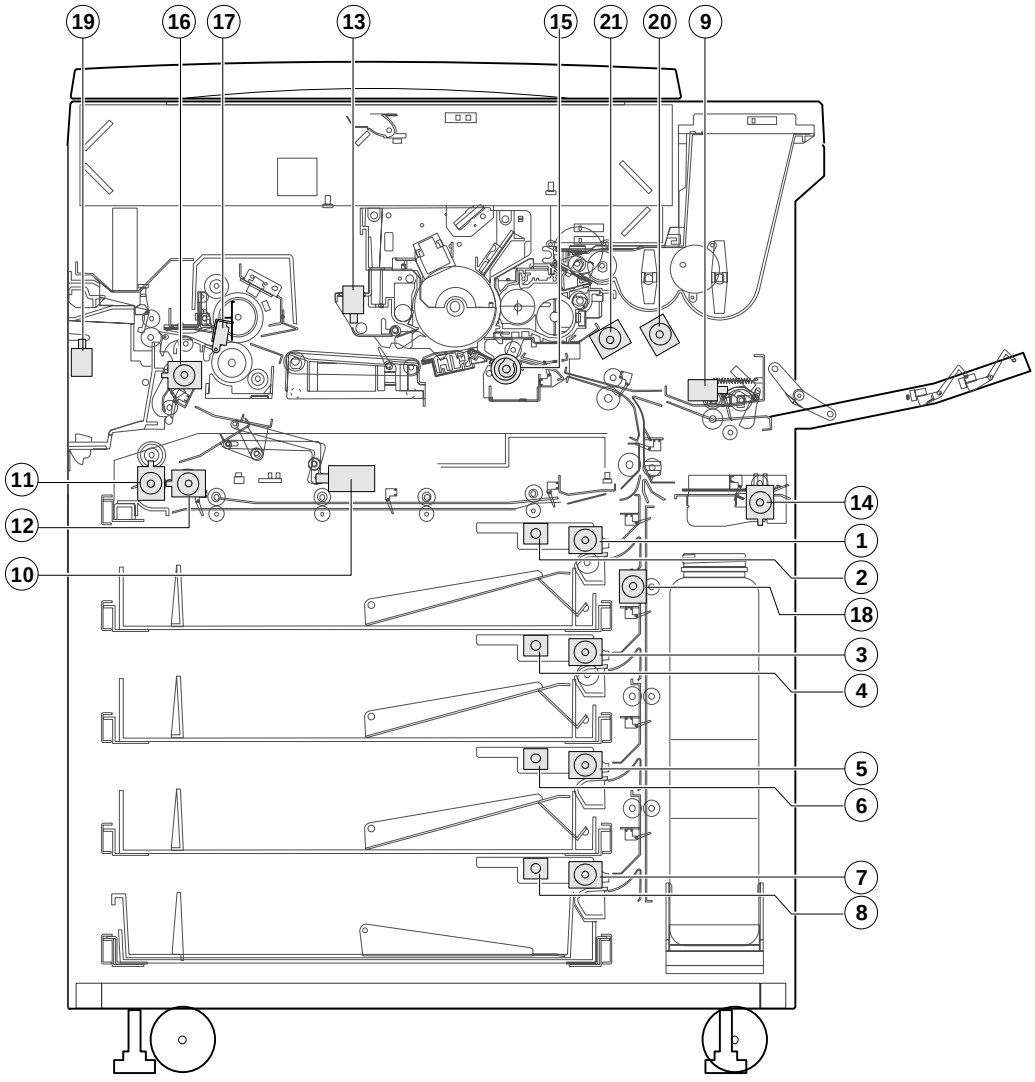
①	No. 2 mirror	②	No. 3 mirror	③	No. 1 mirror	④	Copy lamp
⑤	Lens unit	⑥	Main charger unit	⑦	Blank lamp	⑧	No. 6 mirror
⑨	No. 4 mirror	⑩	No. 5 mirror	⑪	Developing unit toner box	⑫	Developing unit
⑬	Transport roller (upper)	⑭	Transfer charger	⑮	Photoconductor drum	⑯	Separation charger
⑰	Drum separation pawl	⑱	Cleaner unit	⑲	Suction unit	⑳	Suction belt
㉑	Upper heat roller	㉒	Lower heat roller	㉓	Heater lamp	㉔	Lower separation pawl
㉕	Upper separation pawl	㉖	Upper cleaning roller	㉗	Fusing thermistor	㉘	Paper exit separation gate
㉙	manual take-up roller	㉚	Manual paper feed roller	㉛	Manual separation roller	㉜	Resist roller
㉝	Large cassette tray unit paper feed roller	㉞	No. 1 tray take-up roller	㉟	No. 1 tray paper feed roller	㊱	No. 1 tray paper feed reverse roller
㊲	No. 2 tray take-up roller	㊳	No. 2 tray paper feed roller	㊴	No. 2 tray paper feed reverse roller	㊵	No. 3 tray take-up roller
㊶	No. 3 tray paper feed roller	㊷	No. 3 tray paper feed reverse roller	㊸	No. 4 tray take-up roller	㊹	No. 4 tray paper feed roller
㊺	No. 4 tray paper feed reverse roller	㊻	Process control sensor	㊼	Drum marking sensor	㊽	Lower cleaning roller
㊾	Duplex section paper feed roller	㊿	Duplex section paper feed reverse roller	(51)	Duplex section take-up roller		

5. Unit



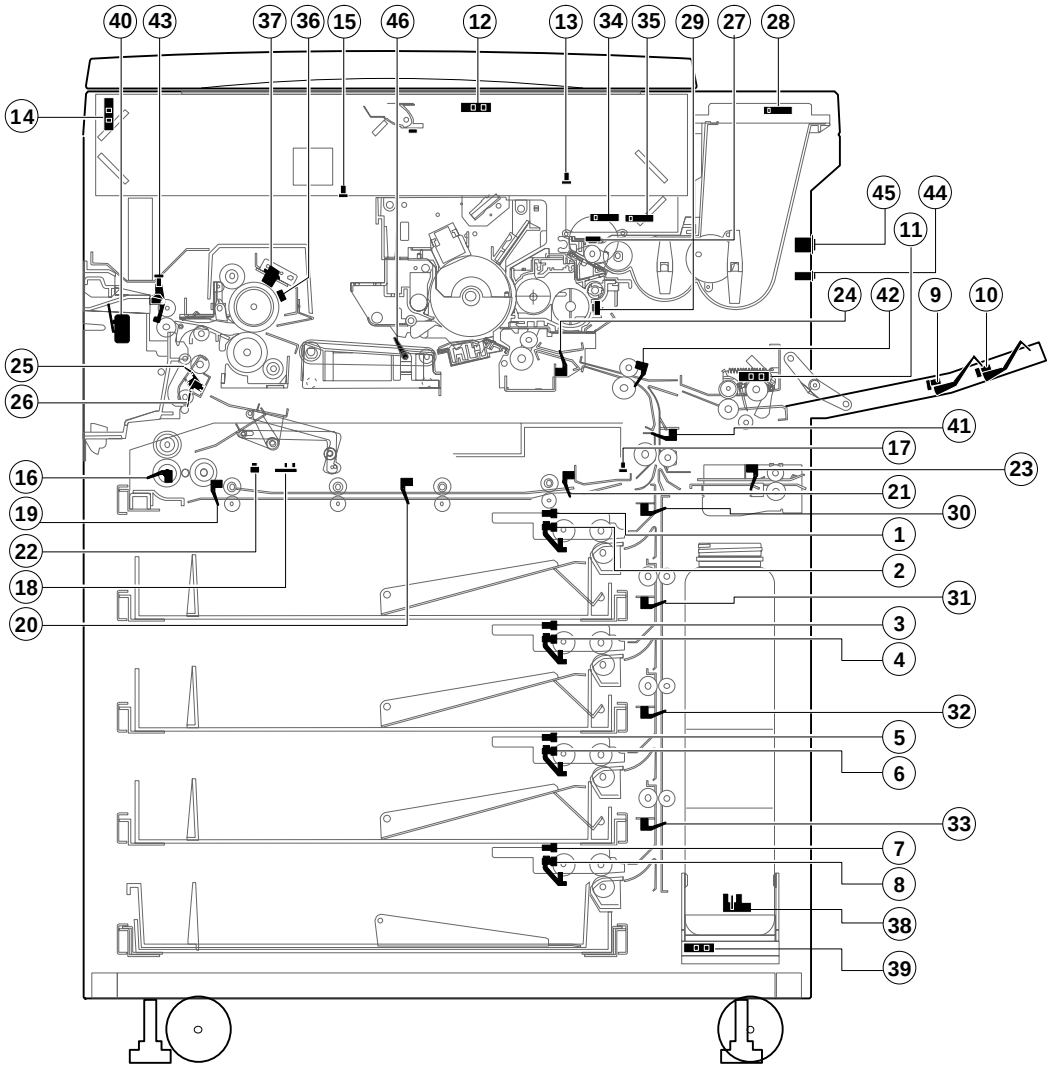
①	Process unit	②	Suction frame unit	③	Fusing unit	④	Optical unit
⑤	Developing unit	⑥	Toner hopper unit	⑦	Transport unit	⑧	Center tray unit (ADU)
⑨	500-sheet tray unit	⑩	Paper feed unit				

6. Clutches and solenoids



	Signal name	Part name	Function and operation	Remark
①	CPFC1	No. 1 cassette paper feed clutch	No. 1 tray paper feed roller rotation	
②	CPFS1	No. 1 cassette paper feed solenoid	No. 1 tray take-up roller rotation	
③	CPFC2	No. 2 cassette paper feed clutch	No. 2 tray paper feed roller rotation	
④	CPFS2	No. 2 cassette paper feed solenoid	No. 2 tray take-up roller rotation	
⑤	CPFC3	No. 3 cassette paper feed clutch	No. 3 tray paper feed roller rotation	
⑥	CPFS3	No. 3 cassette paper feed solenoid	No. 3 tray take-up roller rotation	
⑦	CPFC4	No. 4 cassette paper feed clutch	No. 4 tray paper feed roller rotation	Japan only
⑧	CPFS4	No. 4 cassette paper feed solenoid	No. 4 tray take-up roller rotation	Japan only
⑨	MPFS	Manual feed solenoid	Manual feed take-up roller pressing	
⑩	DPFWS	DP paper feed weight plate solenoid	Duplex paper holding plate driving	
⑪	DPFC	Duplex paper feed clutch	Duplex paper feed roller rotation	
⑫	DTRC	Duplex paper transport clutch	Duplex paper transport roller rotation	
⑬	PSPS	Separation solenoid	Paper separation solenoid driving	
⑭	TRC3	Paper entry roller clutch	Paper entry roller driving from large capacity tray (LCC)	
⑮	RRC	Resist roller clutch	Resist roller driving	
⑯	CURLRC	Curl correction clutch	Curl correction section driving	
⑰	HRS	Heat roller solenoid	Heat roller pressing	
⑱	TRC1	Transport clutch 1	Transport roller rotation	
⑲	DGS	Duplex gate solenoid	Duplex gate ON/OFF	
⑳	TRC2H	Transport clutch 2 (High speed)	Transport roller rotation	
㉑	TRC2L	Transport clutch 2 (Low speed)	Transport roller rotation	

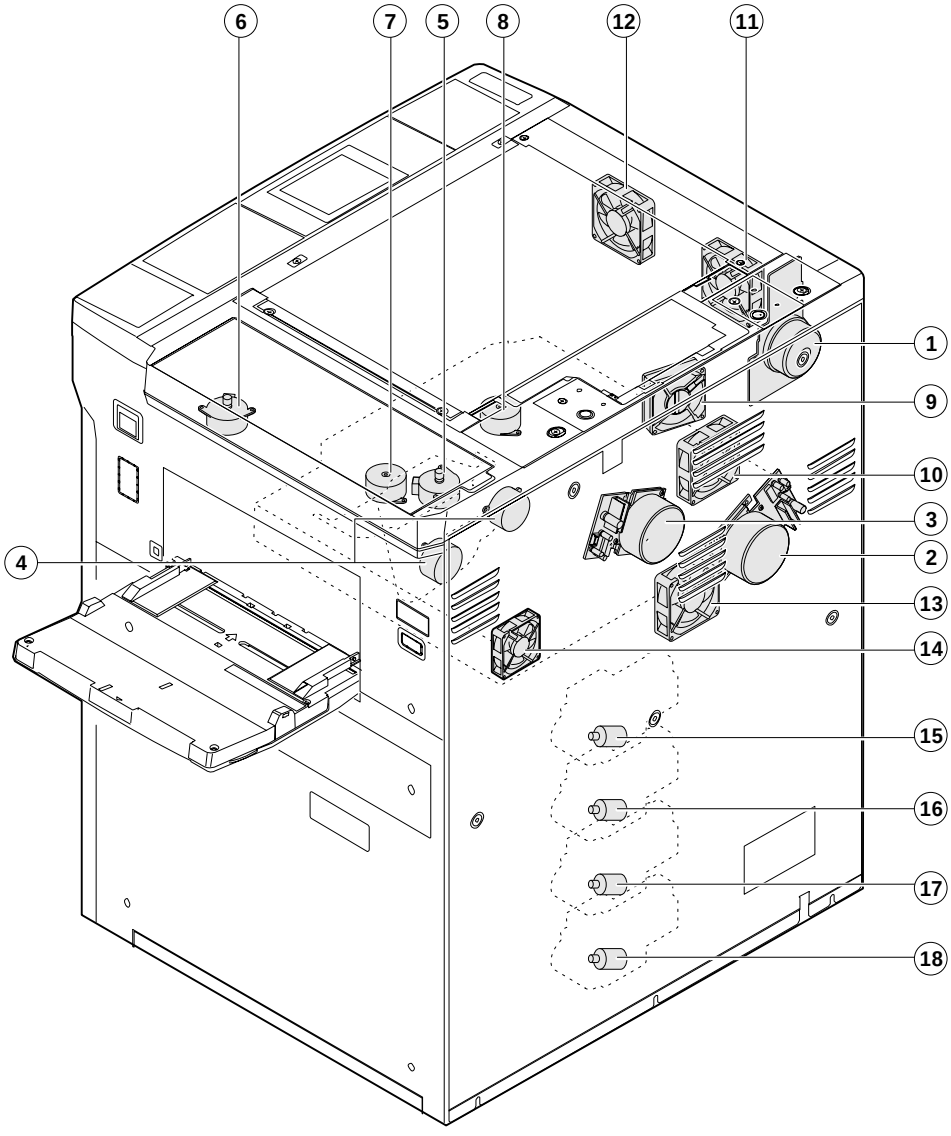
7. Switches and sensors



	Signal name	Part name	Switch/sensor	Function/operation	Remark
①	LUD1	No. 1 cassette upper limit sensor	Sensor	No. 1 tray upper limit sensing	
②	PED1	No. cassette paper sensor	Sensor	No. 1 tray paper presence sensing	
③	LUD2	No. 2 cassette upper limit sensor	Sensor	No. 2 tray upper limit sensing	
④	PED2	No. 2 cassette paper sensor	Sensor	No. 2 tray paper presence sensing	
⑤	LUD3	No. 3 cassette upper limit sensor	Sensor	No. 3 tray paper upper limit sensing	
⑥	PED3	No. 3 cassette paper sensor	Sensor	No. 3 tray paper presence sensing	
⑦	LUD4	No. 4 cassette upper limit sensor	Sensor	No. 4 tray upper limit sensing	Japan only
⑧	PED4	No. 4 cassette paper sensor	Sensor	No. 4 tray paper presence sensing	Japan only
⑨	PLS1	Manual feed paper length sensor 1	Sensor	Manual feed tray paper length sensing	
⑩	PLS2	Manual feed paper length sensor 2	Sensor	Manual feed tray paper length sensing	Inch series
⑪	MPED	Manual feed paper sensor	Sensor	Manual feed tray paper presence sensing	
⑫	OCSW	OC cover open/close sensor	Sensor	OC cover open/close sensing	Japan only
⑬	MBHP	Mirror base home position sensor	Sensor	No. 4, 5 mirror home position sensing	
⑭	MHP	Mirror home position sensor	Sensor	Mirror base (No. 2, 3 mirror) home position sensing	

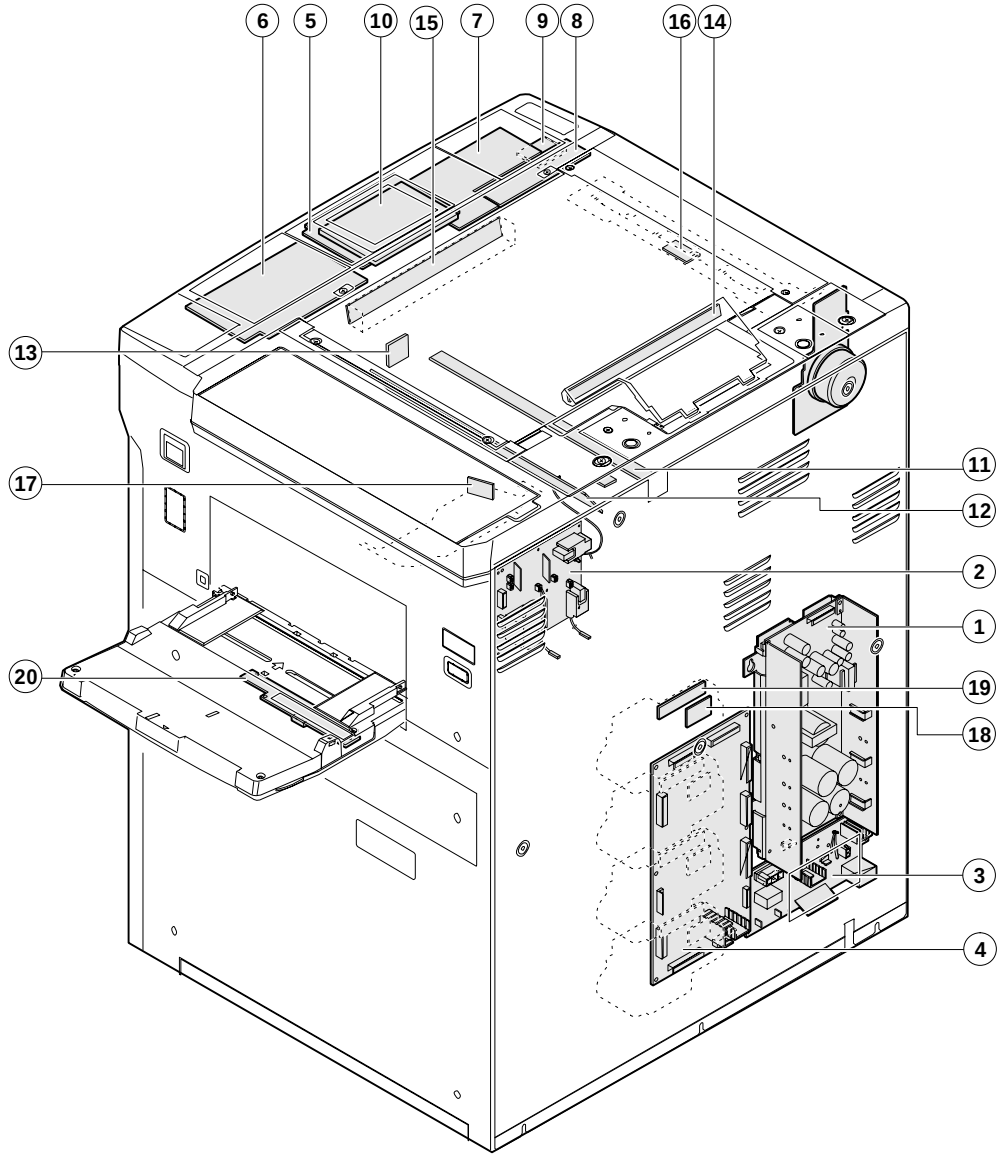
	Signal name	Part name	Switch/sensor	Function/operation	Remark
⑮	LHP	Lens home position sensor	Sensor	Lens home position sensing	
⑯	DPFD	ADU paper feed sensor	Sensor	Duplex section paper feed sensing	
⑰	DTBHPS	ADU rear plate home position	Sensor	Duplex section rear plate home position sensing	
⑱	DTWHPS	ADU alignment plate home position	Sensor	Duplex section alignment plate home position sensing	
⑲	DPPD1	ADU transport sensor 1	Sensor	Duplex section transport sensing	
⑳	DPPD2	ADU transport sensor 2	Sensor	Duplex section transport sensing	
㉑	DPPD3	ADU transport sensor 3	Sensor	Duplex section transport sensing	
㉒	DTPD	ADU paper sensor	Sensor	Duplex section paper presence sensing	
㉓	DFDL2	Paper feed sensor 5	Sensor	LCC paper feed sensing	
㉔	PPD3	Transport sensor 3	Sensor	Paper transport sensing	
㉕	DPID1	ADU paper entry sensor 1	Sensor	Duplex section paper entry sensing	
㉖	DPID2	ADU paper entry sensor 2	Sensor	Duplex section paper entry sensing	
㉗	TES	Toner empty sensor	Sensor	Toner hopper toner empty sensing	
㉘	TNCTR in	Toner cartridge sensor	Switch	Refill toner cartridge installation sensing	
㉙	TCS	Toner density sensor	Sensor	Developing unit toner density sensing	
㉚	PFD1	Paper feed sensor 1	Sensor	No. 1 tray paper feed sensing	
㉛	PFD2	Paper feed sensor 2	Sensor	No. 2 tray paper feed sensing	
㉜	PFD3	Paper feed sensor 3	Sensor	No. 3 tray paper feed sensing	
㉝	PFD4	Paper feed sensor 4	Sensor	No. 4 tray paper feed sensing	Japan only
㉞	DSWF1	Front cover switch 1	Switch	Front cover open/close sensing	100V system
㉟	DSWF2	Front cover switch 2	Switch	Front cover open/close sensing	100V system
㊱	TS	Thermostat	—	—	
㊲	THS	Fusing temperature sensor	Thermister	Fusing section temperature sensing	
㊳	TBBOX	Waste toner bottle sensor	Sensor	Waste toner bottle presence sensing	
㊴	TNF	Waste toner full sensor	Sensor	Waste toner full sensing	
㊵	DSWE	Paper exit section open switch	Switch	Paper exit section open/close sensing	100V system
㊶	PPD1	Transport sensor 1	Sensor	Paper transport sensing	
㊷	PPD2	Transport sensor 2	Sensor	Paper transport sensing	
㊸	POD	Paper exit sensor	Sensor	Paper transport sensing	
㊹	DHSW	Dehumidifier heater switch	Switch	Dehumidifier heater ON/OFF	Japan only
㊺	MSW	Power switch	Switch	Power switch ON/OFF	Japan only
㊻	PSD	Separation sensor	Sensor	Paper separation sensing,	

8. Motors



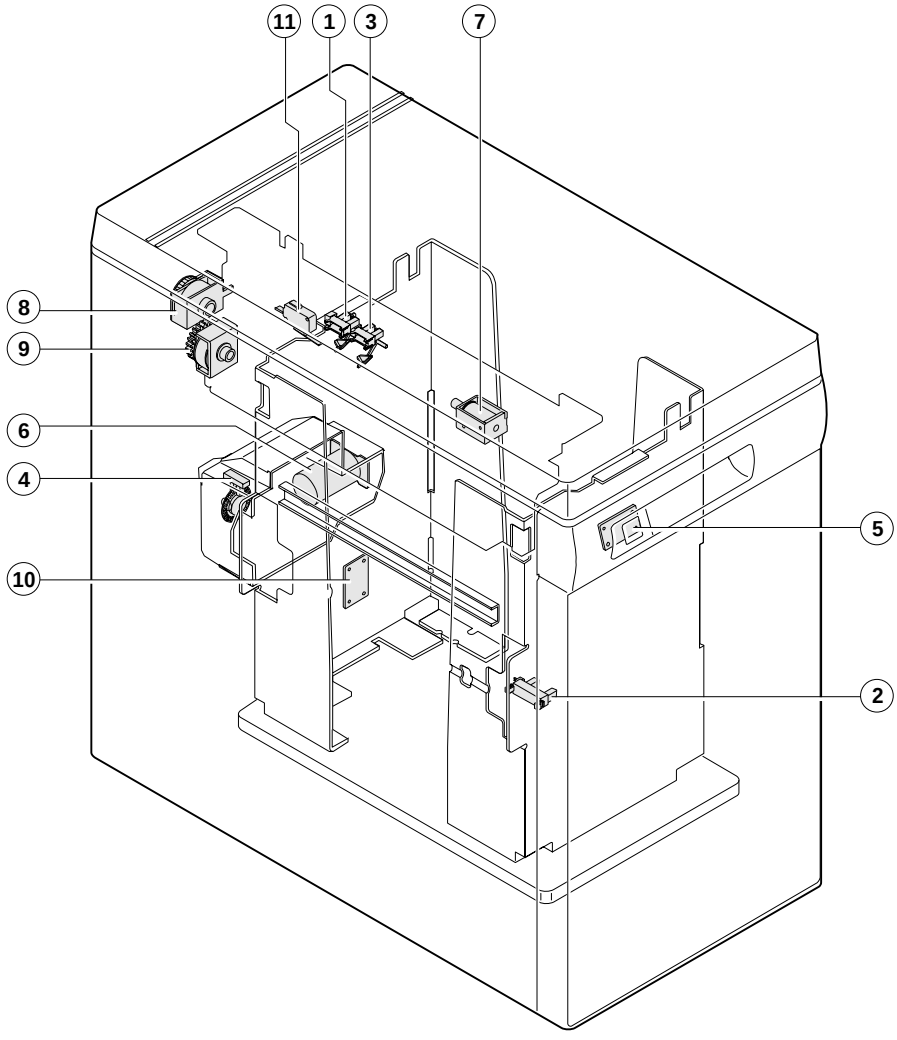
①	Mirror motor	②	Main motor	③	Drum motor	④	Toner motor
⑤	No. 4, 5 mirror base motor	⑥	Lens motor	⑦	Duplex motor 1 (for shifting the rear plate)	⑧	Duplex motor 2 (for shifting the alignment plate)
⑨	Cooling fan motor	⑩	Ventilation fan motor 1	⑪	Ventilation fan motor 2	⑫	Ventilation fan motor 3
⑬	Suction fan motor	⑭	DV fan motor	⑮	Tray lift-up motor 1	⑯	Tray lift-up motor 2
⑰	Tray lift-up motor 3	⑱	Tray lift-up motor 4				

9. PWB unit list



①	DC power PWB	②	High voltage PWB	③	AC circuit PWB	④	Main control PWB
⑤	Operation control PWB	⑥	Operation PWB 1	⑦	Operation PWB 2	⑧	Operation PWB 3
⑨	LCD invertor PWB	⑩	LCD unit	⑪	DL PWB	⑫	BL PWB
⑬	Sensor volume PWB	⑭	Original sensor light emitting PWB (Japan only)	⑮	Original sensor light receiving PWB (Japan only)	⑯	AE sensor PWB
⑰	Light quantity correction PWB	⑱	Lift-up motor PWB	⑲	Cassette paper size sensor PWB	⑳	Manual feed paper size sensor PWB

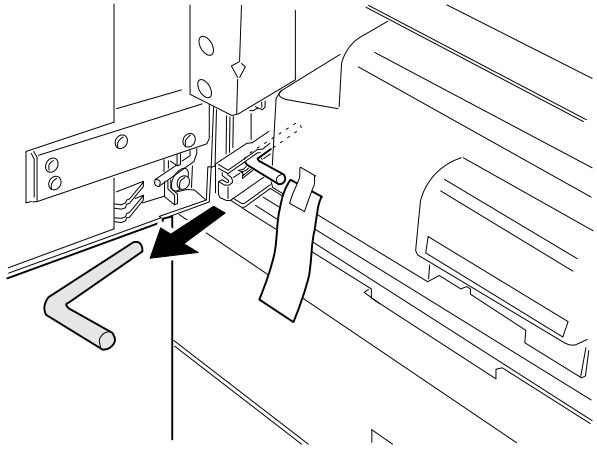
10. Large capacity cassette unit (LCC)



	Signal name	Part name	Switch/sensor	Function/operation	Remark
①	TLMD	Tray upper limit sensor	Sensor	Tray upper limit sensing	
②	TLD	Tray lower limit sensor	Sensor	Tray lower limit sensing	
③	TUD	Tray paper upper section sensor	Sensor	Tray paper upper section and paper presence sensing	
④	TPTD	Tray shift quantity sensing PT sensor	Sensor	Remaining paper quantity sensing	
⑤	TCD	Door open Tray SW PWB	—	Door (tray) open/close sensing	
⑥	—	Tray lift motor	—	Tray up down	
⑦	LPFS	Paper feed solenoid	—	Paper feed roller pressing	
⑧	LPFC	Paper feed clutch	—	Paper feed roller rotation	
⑨	LPFC2	Paper feed reverse clutch	—	Double feed preventing clutch	
⑩	—	Fuse PWB unit	—	—	
⑪	—	Upper lock SW	Switch	Upper limit lock sensing (Cutting the motor power for safety.)	

[6] UNPACKING AND INSTALLATION

1. Packing form view



Unpack in the following sequence referring to the packing form view.

- Copier body

① Remove the PP band.

② Remove the top support plate and the top case.

③ Pull out the copier case upward.

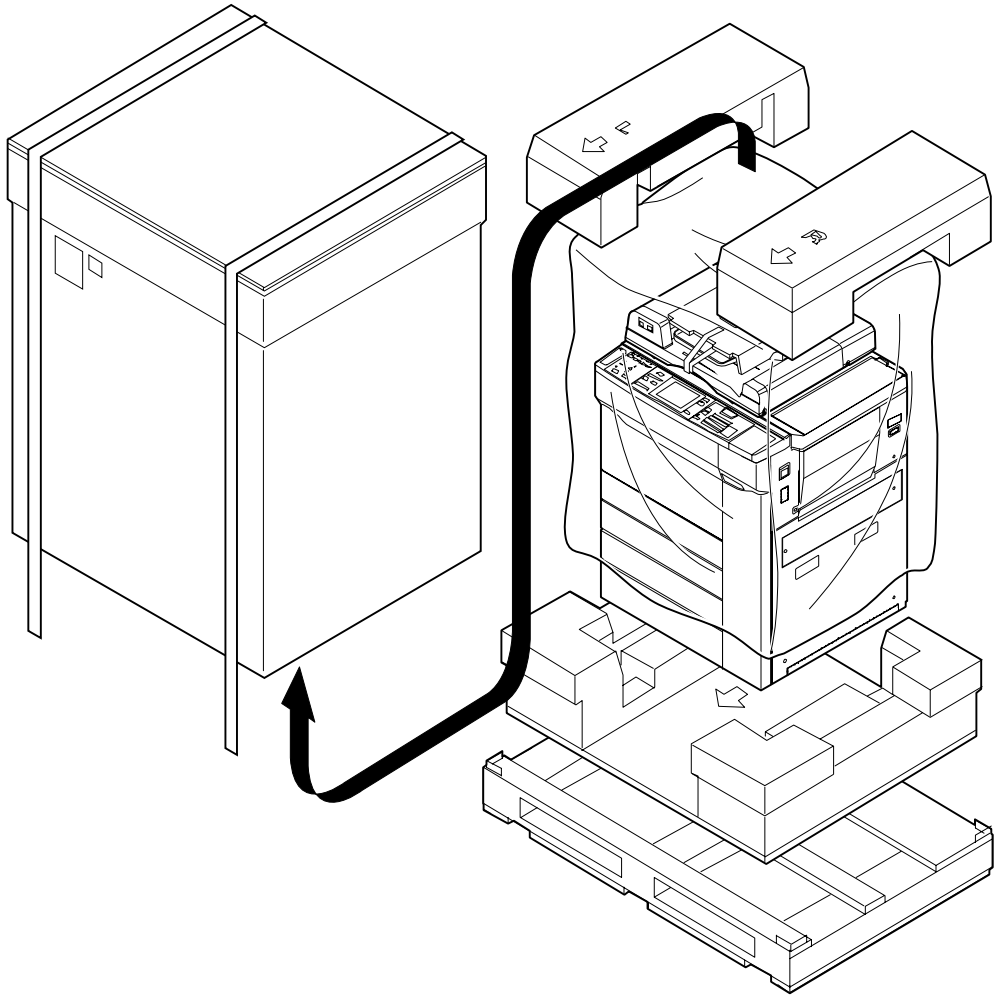
④ Remove top pads L and R.

⑤ Remove polyethylene bag.

⑥ Remove the copier from the bottom case.

⑦ Remove packing cushions and filament tape.

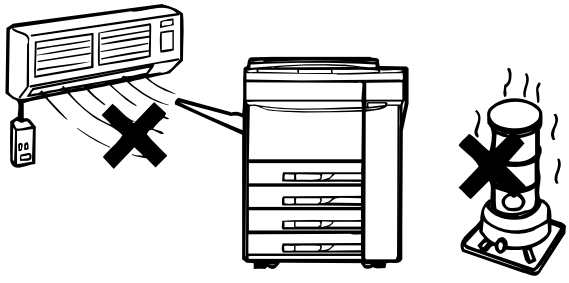
⑧ Remove metal fitting of the duplex unit.



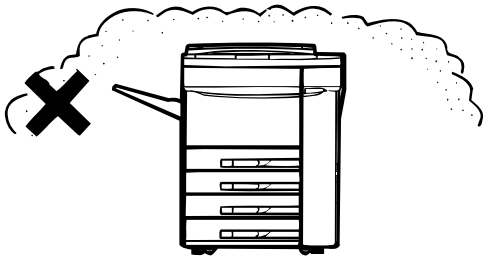
2. Installation

The surrounding conditions of the machine affect the machine performance greatly. Avoid installation to the following places.

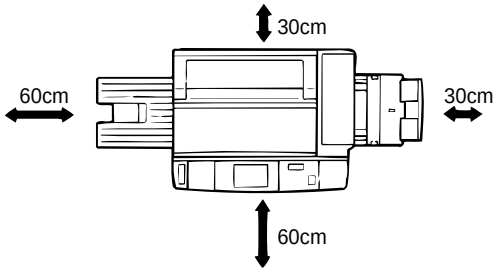
- Avoid high temperature, high humidity, low temperature, and low humidity. Avoid sudden temperature change. (Avoid installation near a stove, a humidifier, a cooler, etc.)



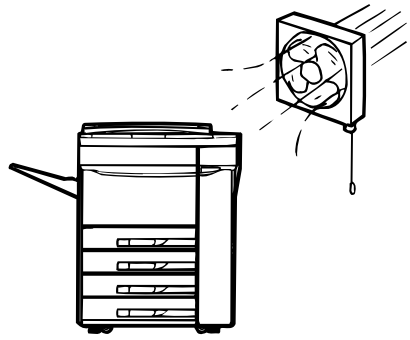
- If not, paper absorbs moisture and dew forms in the machine, causing paper jam or degraded image quality.
  (Use condition: 15 ~ 30°C, 20% ~ 85%RH)
  For an ultrasonic humidifier, use pure water for it. If top water is used for an ultrasonic humidifier, mineral components are dispersed to be accumulated in the copier, causing copy dirt.
- Avoid a dusty place.



- If dusts enter the machine, copy dirt or some troubles may occur.
- Allow enough space around the copier for proper operation and for ventilation. (Allow clearances from the walls as shown.)

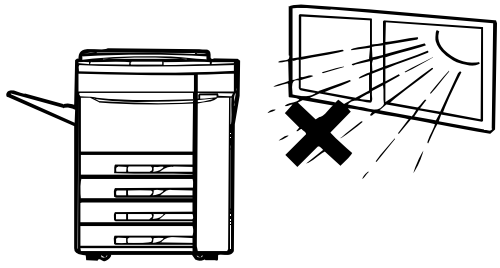


- Avoid a poorly ventilated place.

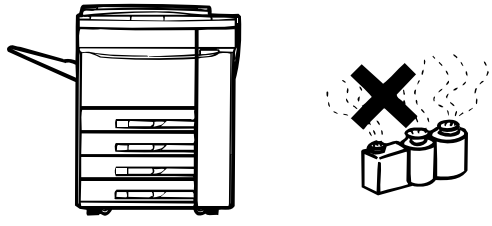


- Ozone is produced during copying at a level which causes no adverse effect to human bodies. When, however, making a great volume of copies, it smells a little. It is better to install the copier in a well ventilated place with a window or a ventilator.

  ※ If the copier is installed near a window, be careful not to subject it to direct sunlight.
- Avoid direct sunlight.

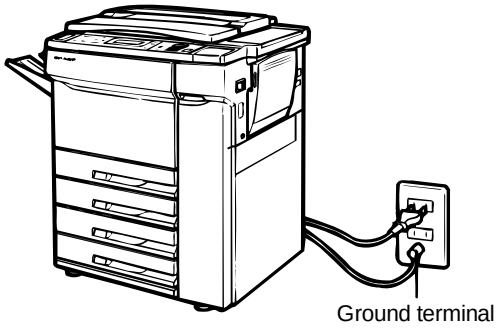


- The plastic parts may be deformed or copy dirt may result.
- Avoid a place where there is ammonia gas.



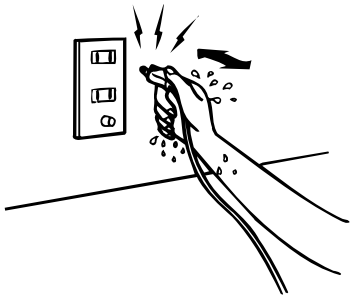
- If the copier is installed near a diazo copier, copy dirt may result.

Be sure to connect the grounding wire.
If not, a leak current may cause a fire or an electric shock. For grounding, consult the distributor.



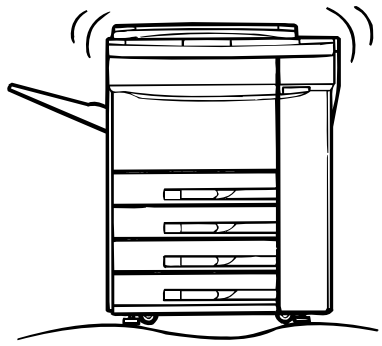
Do not remove the cabinet of the copier. There are high voltage sections, which may cause electric shocks.

Do not touch the power plug with a wet hand. It may cause an electric shock.



Do not remodel the copier. It may cause a fire or an electric shock.

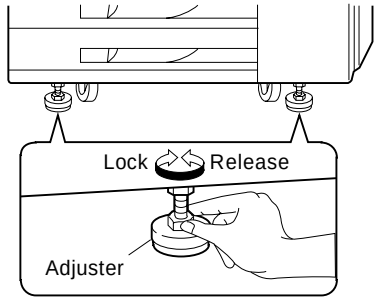
Avoid installation to an uneven floor, an unstable surface, or a tilted surface. It may be dangerous.
Be sure to install the copier to a solid, flat place horizontally.
(The copier weight: about 131kg.)



3. Fixing the copier with the adjuster

① Move the copier to the installing position.

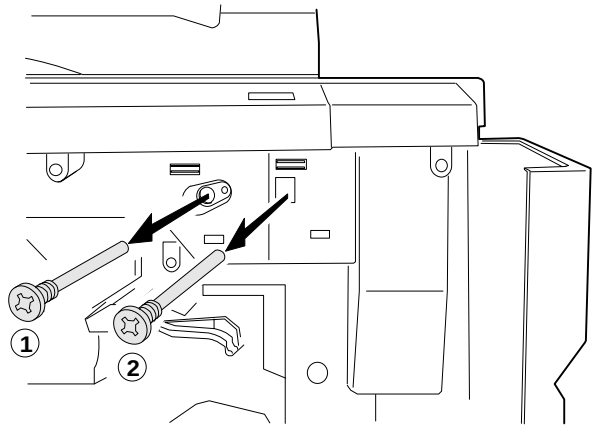
② Turn the adjusters clockwise so that they make in contact with the floor, and fix the copier.



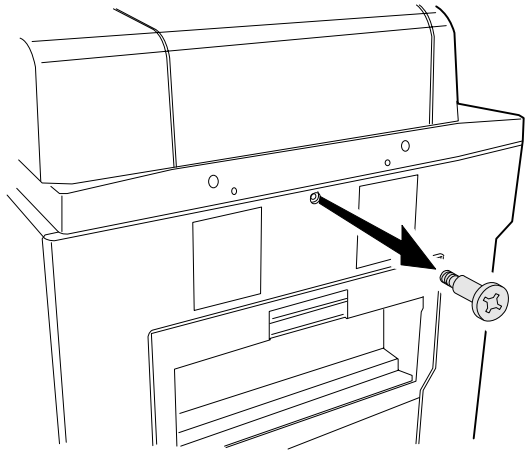
4. Optical system lock release

① Lens unit lock release: Open the front cover and remove the lens unit lock screw.

② No. 4/5 mirror base unit lock release:
Open the front cover and remove the No. 4/5 mirror base lock screw.

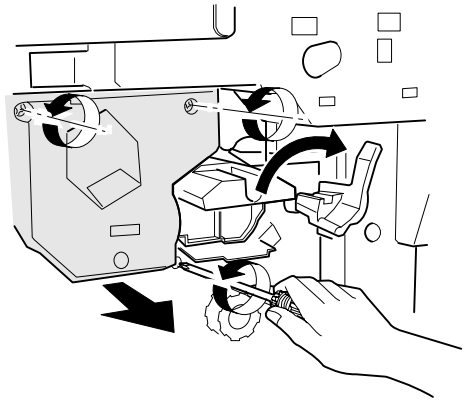


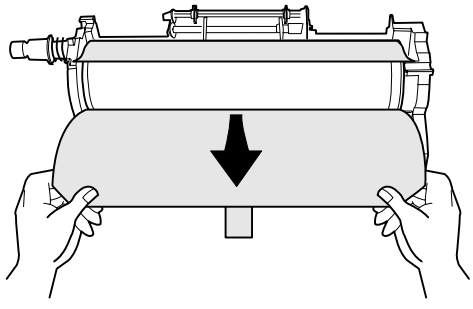
③ No. 2/3 mirror base unit lock release:
Remove the lock screw in the supper side of the left cabinet.



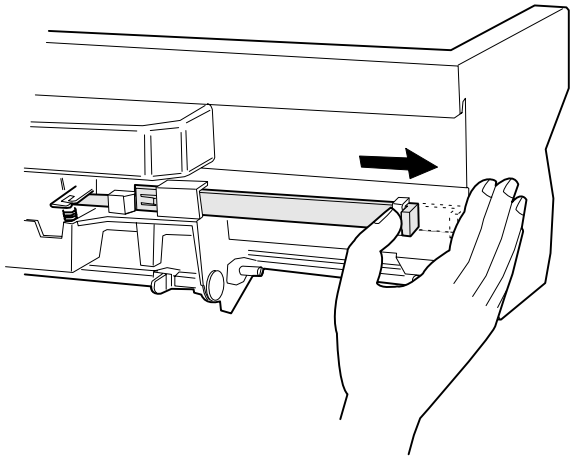
5. Set up of process unit

① Remove the process unit and remove the photoconductor drum protection sheet.





② Open the front cover and the front door, and slowly pull out the blade release arm in the process section. (The cleaner blade is pressed onto the drum.)



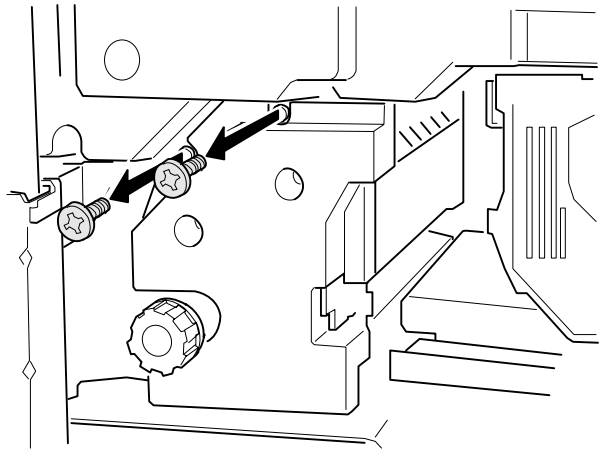
③ Turn the photoconductor drum one rotation clockwise.

④ Install the process unit on the main body.

6. Set up of fusing unit

(1) Fusing unit removal from the body

① Open the front cover, and remove two fixing screws in the upper side.

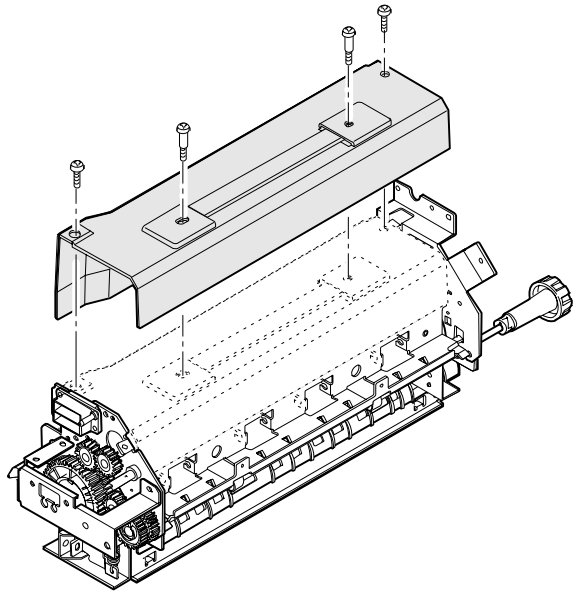


② Open the paper exit side cabinet, hold the fusing knob, and slowly pull out the fusing unit toward you.

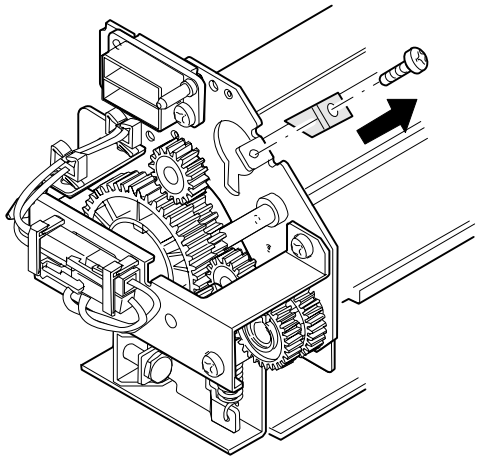
③ Hold the fusing handle and remove the fusing unit from the copier body.

(2) Installation of upper cleaning roller for fusing unit

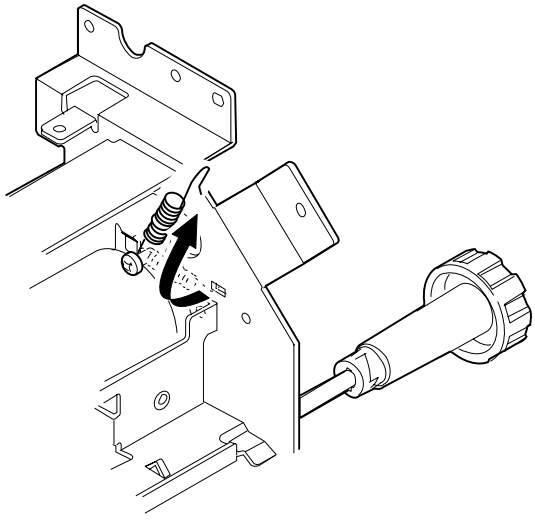
① Remove the four screws which are fixing the fusing cover upper, and remove the fusing cover upper.



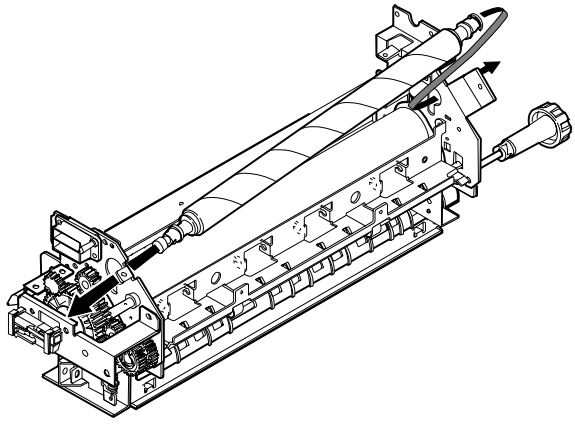
② Remove the screw in the left upper side (when viewed from the paper exit side) of the fusing unit, and remove the upper cleaning roller holding plate.



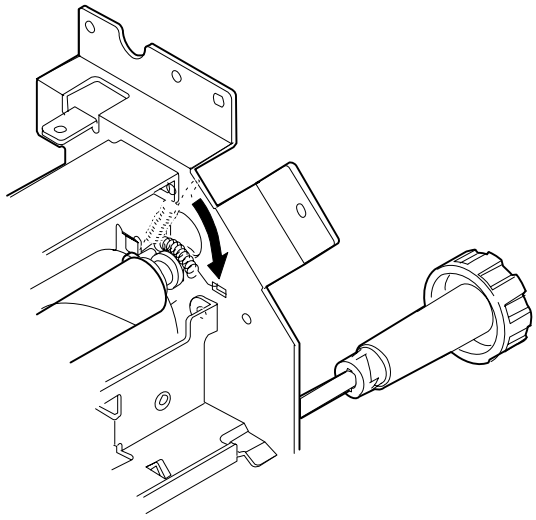
③ Remove the hook section of the upper cleaning roller spring C from the fusing frame F.



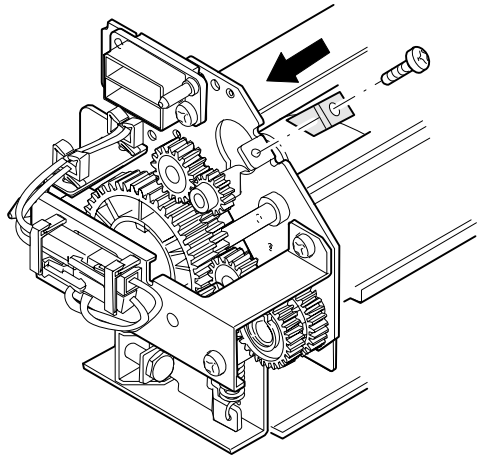
④ Insert the gear section of the upper cleaning roller, and put the bearing in the groove.



⑤ Hang the upper cleaning roller spring on the fusing frame F over the bearing.

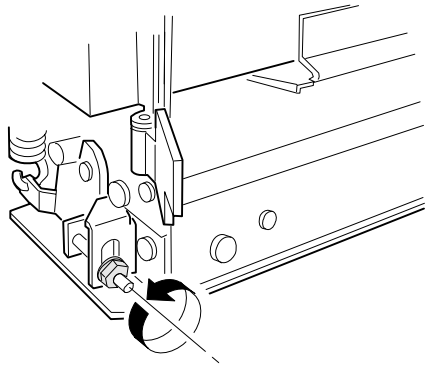


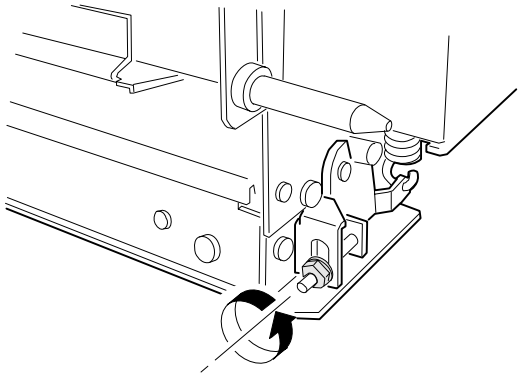
⑥ Fix the upper cleaning roller holding plate with the fixing screw.



(3) Pressure roller pressing

Loosen the blue nut which is under the fusing knob (at the bottom of the fusing unit) to press the pressure roller.

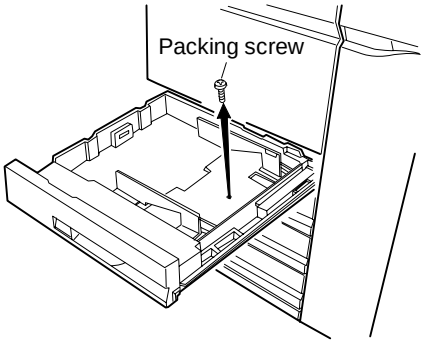




7. Setting up the paper tray

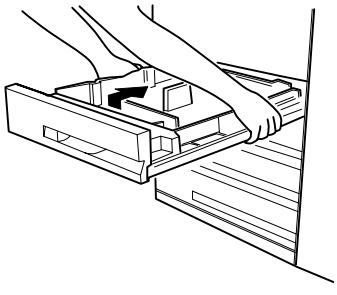
(1) Remove the packing screw of the cassette

Pull out the tray drawer by lifting while pulling out drawer.
Remove the one packing screw that secures the paper tension plate of the tray.



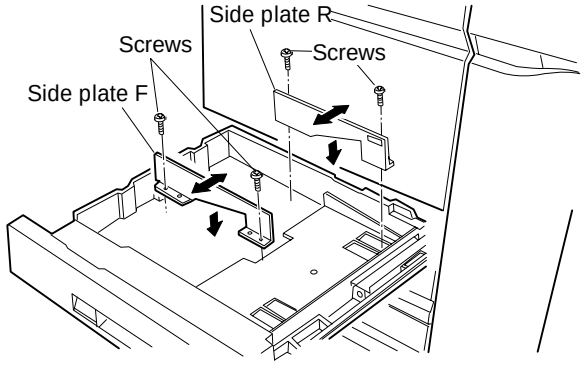
(2) Removing the tray

Hold up the tray grasping the both sides of the tray and pull it all the way out.



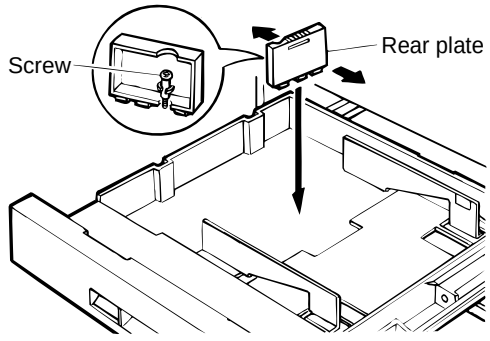
(3) Change the size using the side plates F and R

Remove two screws that hold the side plates F and R. Set the plates into their position shown with notches, and secure with the two screws.



(4) Insert the rear plate

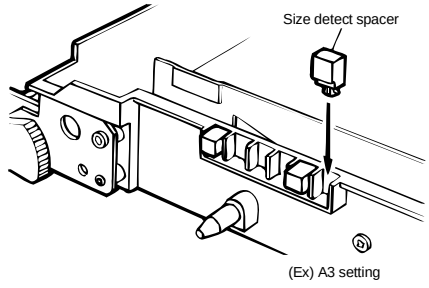
Remove the rear plate and set the plate into the position indicated for the desired paper sixe.



When the special size (A5) is selected, use the set screw packed in the same package of the body to fix.

(5) Set the size detect spacer

Change the position of the size detect spacer. Move the spacer to the appropriate positions.



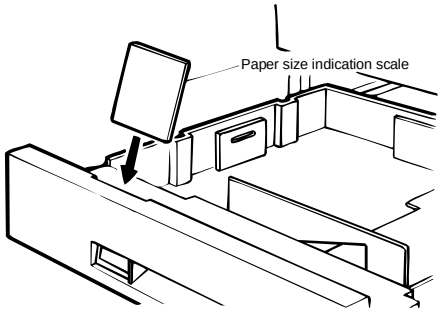
AB system

A3 ➡						
A4 ➡						
A4R ➡						
B4 ➡						
B5 ➡						
B5R ➡						
W letter ➡						
Legal ➡						
Letter R ➡						
Letter ➡						
Invoice ➡						
A5 ➡						

(6) Change the paper size indication plate

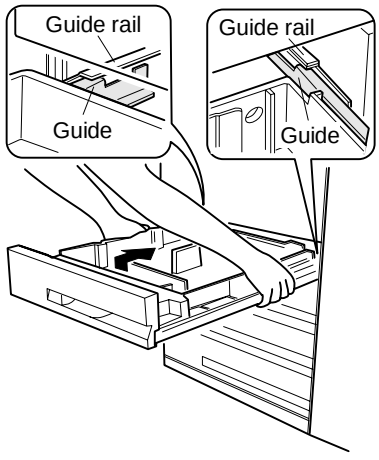
Remove the paper size indication plate. Install the plate so the size of the paper can be seen from the window.

Paper sizes are printed on the front and the back of the paper size indicator plate.



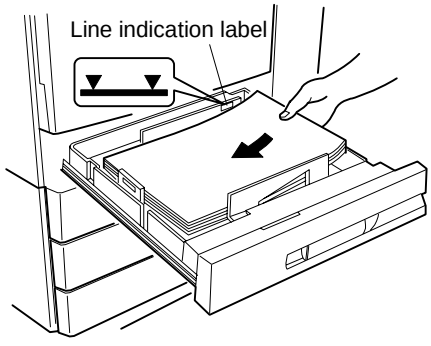
(7) Set the cassette

Hold up both sides of the cassette from back and insert it along the guide rails. Ensure the cassette moves in and out smoothly.



(8) Load paper

Load paper in the cassette, but not above the maximum line.
Insert the cassette all the way into the machine.

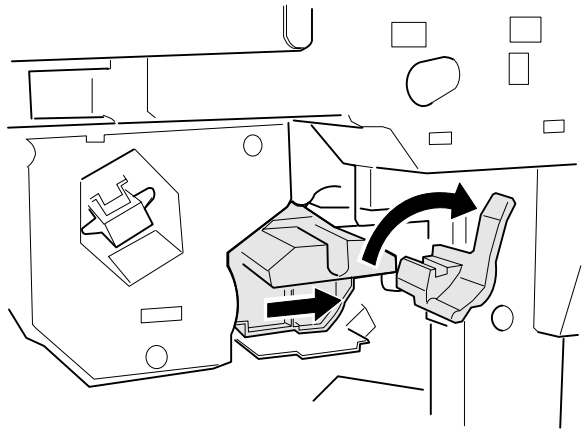


8. Developer supply

(1) Developing unit removal

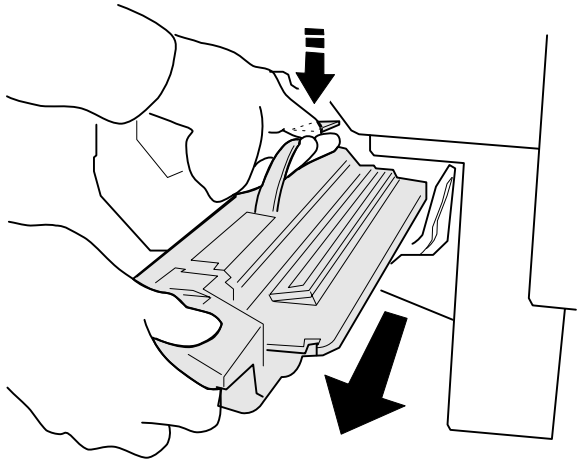
① Open the front cover of the copier.

② Push the developing unit pressure lever down to separate the developing unit from the drum.



③ Slowly pull out the developing unit until it is stopped by the lock

④ Press the DV stopper to release the lock.

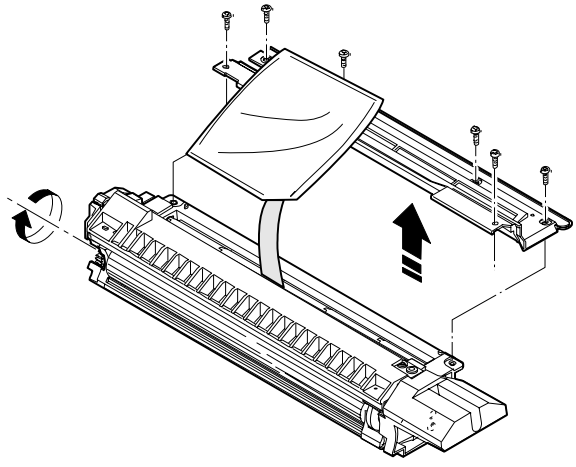


⑤ Hold the DV handle to remove the unit from the copier.

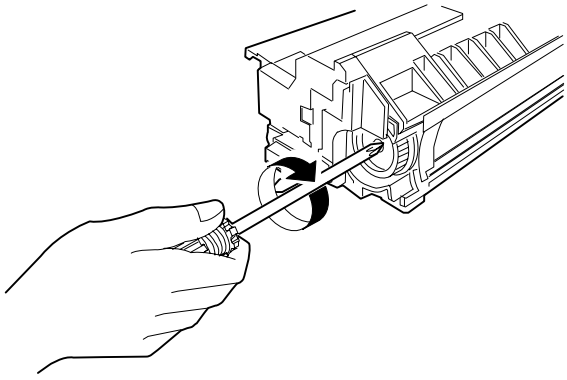
(2) Developer supply

① Remove four screws of the DV joint of the developing unit.

② Supply developer.



③ Turn the MG roller with a screwdriver to attach the developer to the MG.



④ Attach the DV joint.

⑤ Attach the developing unit to the copier.

(3) Developing unit installation

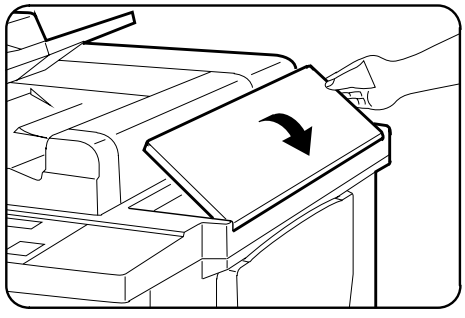
9. Toner supply to the toner hopper

∗ After completion of automatic developer adjustment, supply toner.

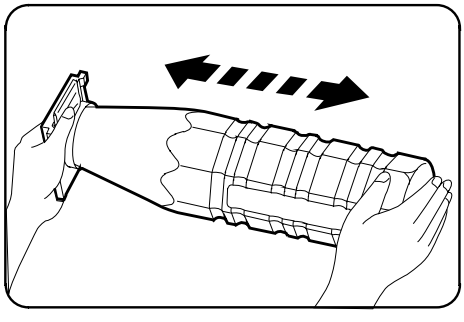
∗ Shake the toner cartridge well before setting it.

(1) Open the toner hopper cover.

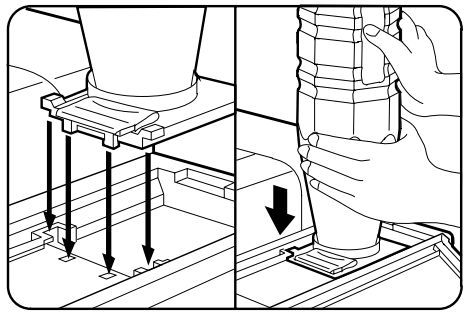
NOTE: Do not press down on the open toner hopper cover.



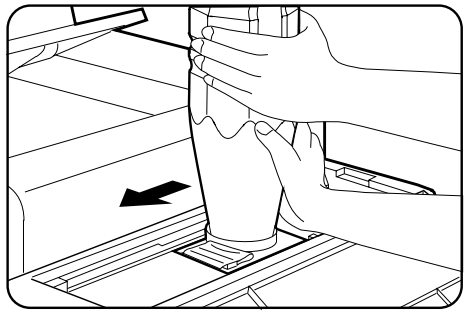
(2) Hold the toner cartridge horizontally and vigorously shake it lengthwise about 20 times to loosen the toner. This will allow the toner to flow more easily into the toner hopper.



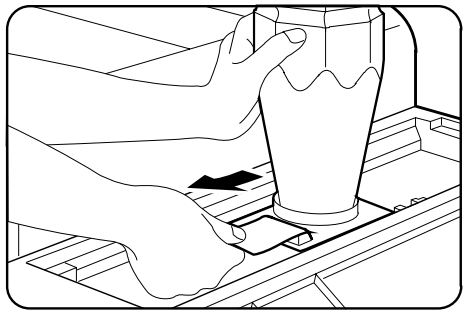
(3) Place the new toner cartridge with the tabs in the notches as shown.



(4) Slide the toner cartridge along the guides over the toner hopper.

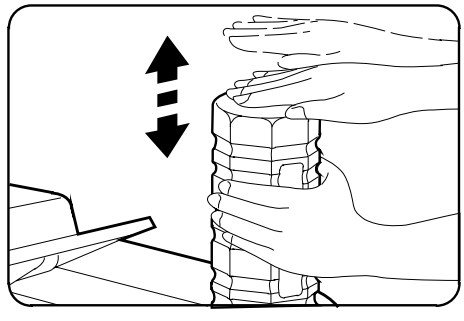


(5) Hold the toner cartridge with one hand while pulling on the sealing tape to remove it.



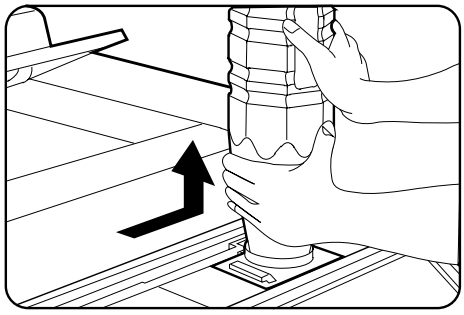
(6) Tap on the top of the toner cartridge 5 times to release all toner into the toner hopper.

- It will take about 30 seconds for the toner to flow into the toner hopper. Do not remove the toner cartridge until it is empty.



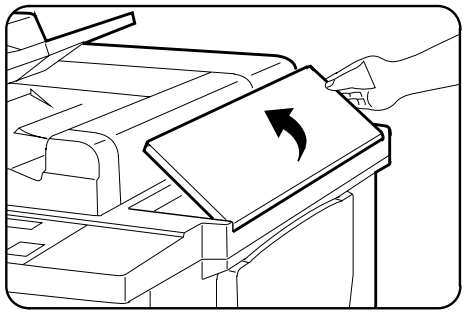
(7) Slide the empty toner cartridge back along the guides and remove it.

- The cartridge opening will be closed as it is moved back along the guides.



(8) Close the toner hopper cover.

NOTE:
Add only one cartridge of toner.



Note
Supply only one toner cartridge for one time. If two or more cartridges are supplied, toner will flow out.

10. Initial toner density level registration (AUtomatic developer adjustment)

① Insert the developing unit into the copier and press it onto the photoconductor drum with the pressure lever.

② Check that the process unit, the transport unit, and the fusing unit are securely installed.

③ Close the front covers (L and R).

④ Connect the power plug and turn on the power switch.

⑤ Execute simulation 25-02.

The drum motor rotates and the developing unit is driven for 3 minutes. After 3 minutes,the initial toner density level is sensed by the toner density sensor and stored in the memory of the main PWB.

Procedure: [C] → [=✓] → [0] → [=✓] → [2] [5] →
[START] → [2] → [START]

[Note]

- For automatic developer adjustment, check the following and perform it.
- Check that the cleaner blade is in close contact with the photoconductor.
- Check that each charger unit is installed.

⑥ Cancel the simulation mode.

11. Initial system setting

(1) Destination setting

Check the destination setting with the simulation.

① Execute simulation 26-6.

SIMULATION NO. 26-6
[INCH]
0. SEC (ES) 1. SEC 2. SECL 3. OTHER
[AB (B5)]
4. JAPAN 5. OTHER
[AB (A5)]
6. SEEG 7. SUK 8. SCA 9. OTHER
PLEASE SELECT DESTINATION BY 10-KEY PAD.

1	2	3
4	5	6
7	8	9

Option setting for each destination

No.	Destination	No. of trays	LCC	RADF	Original sensor unit	Sorter	Toner save mode	P21
0	SEC (ES)	3	● (LT)	○	×	△	P22	SHUT OFF
1	SEC	3	● (LT)	○	×	△	P22	Power save
2	SECL	3	● (LT)	○	×	△	P22	Power save
3	INCH, etc.	3	● (LT)	●	×	△	P22	Power save
6	SEEG	3	△	△	×	△	P22	Power save
7	SUK	3	△	△	×	△	—	Power save
8	SCA	3	△	●	×	△	P22	Power save
9	A5, etc.	3	△	●	×	△	P22	Power save

○ : Standard provision
● : Installed when setting the destination. (Setting changeable)
× : Not installed.
△ : Not installed when setting the destination. (Setting changeable)

② If setting is improper, enter with the 10-keypad and press the START key to set again.

(2) Option setting

For option setting, follow the procedures below.

① Execute simulation 26-1.

SIMULATION NO. 26-1
OPTION SETUP.
CODE : RADF SORTER/STAPLE SORTER
1 : ○ ○
2 : ○ ×
3 : × ○
4 : × ×
○ : SETTING × : NO SETTING
PLEASE SELECT BY 10-KEY PAD.

② Check the option which is to be installed to the copier. Enter with the 10-keypad, and press the START key to set.

③ When using the large capacity cassette (LCC, SF-C52), execute simulation 26-2 to set the paper size.

SIMULATION NO. 26-2
LCC SIZE SETTING
0. NO LCC
1. 8.5″ × 11″ (216 × 279)
2. A4
3. B5

For the four-stage trays, there is no paper size setting for each tray. (Setting is made only with the size sensor.)

12. Initial setting related to process control

The check and adjustment must be performed when replacing the photoconductor drum or the process control PWB, when cleaning or replacing the sensors, or before performing the picture quality adjustment.

SIMULATION NO. 44 INPUT 1 ~ 9 1. DISABLE/ENABLE PROCESS-CONTROL SETUP. 2. DMS POWER SETUP. 3. IDS POWER SETUP. 4. PROCESS CONTROL DATA BASE ENTRY. 5. (NO PROGRAM) 6. (NO PROGRAM) 7. DMS/IDS SENSOR LEVEL CHECK. 8. (NO PROGRAM) 9. PROCESS CONTROL DATA DISPLAY.

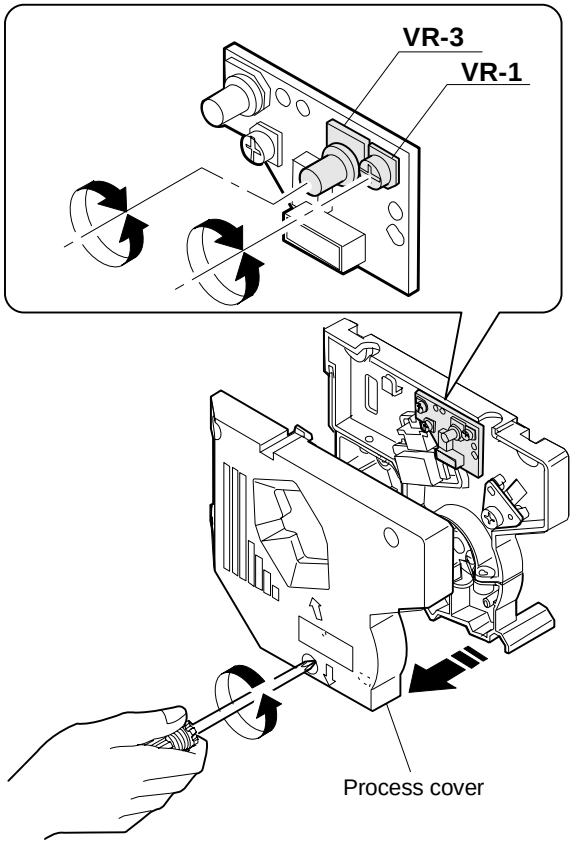
(1) Drum marking sensor output check

① Open the front cover and remove the process unit cover. (Screw, 1 pc.)

② Execute simulation 44-2.

The photoconductor drum rotates and the output adjustment value of the drum marking sensor is displayed on the copy quantity display.

③ If the displayed output adjustment value is outside the adjustment range, adjust the rough adjustment control (VR-1) and the minute adjustment control (VR-3) on the process control PWB so that the value is 170 ±10.



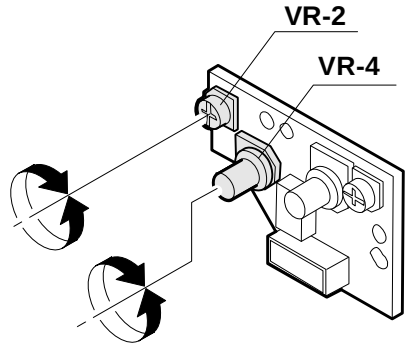
(2) Process control sensor (image density sensor) output check

① Execute simulation 44-3.

The photoconductor drum rotates and the image density sensor output is displayed on the copy quantity display.

② Check that the displayed output adjustment is 815 ± 15.

If the displayed output adjustment value is outside the adjustment range, adjust the rough adjustment control (VR-2) and the minute adjustment control (VR-4) on the process control PWB so that the value is 815 ±10.

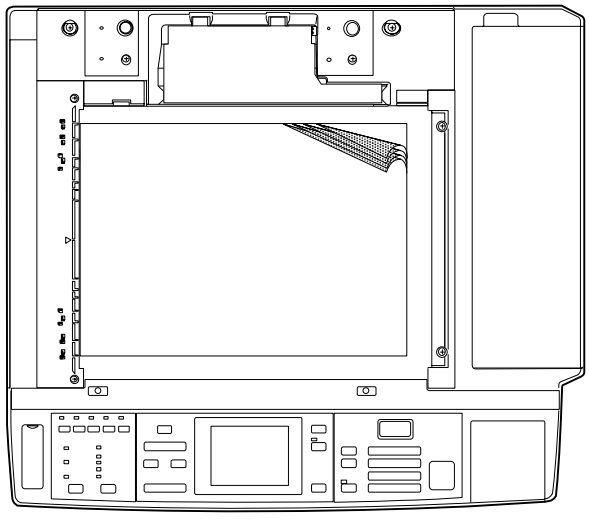


13. Initial AE sensor level adjustment

① Execute Sim. 47. (The mirror base starts scanning, and stops at the AE sensor level measurement point.)

② Put several sheets of white paper (A4 or 11" x 17") on the original table.

③ Press the START key again, and the AE sensor output level with the white original is displayed on the copy quantity display. The output level is stored.



14. Initial image quality adjustment procedure

A. Manual density adjustment

(1) Normal mode density adjustment

① Execute simulation 46 (Copy density adjustment).

The exposure data of the manual copy mode is displayed on the copy quantity display.

② Check that "1" (manual density mode) is displayed on the LCD panel.

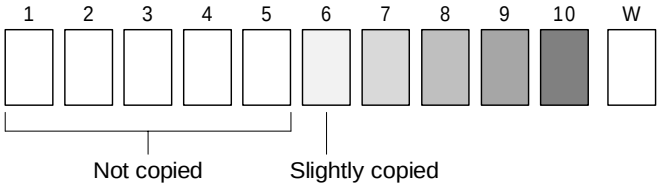
If the display is other than "1," use the exposure select key and the exposure key to set to "1."

③ Make a copy.
Check that "6" of UKOG-0162FCZZ is slightly copied. (0.5 of UKOG-0089FCZZ is clearly copied.)

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



④ When the copy density is within the specified range, press the dark exposure key to set the manual exposure level to 5.

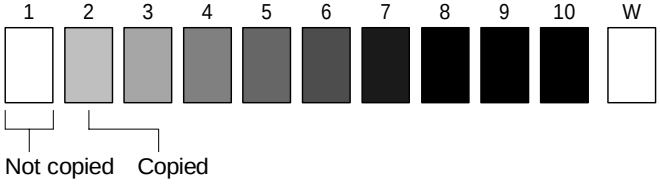
⑤ Make a copy.

Check that "2" of UKOG-0162FCZZ is clearly copied. (0.2 of UKOG-0089FCZZ is clearly copied.)

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



(2) Toner save mode adjustment

① Press the exposure select key to set to the manual density mode. Press forward scroll key (→) and check that "1" (toner save mode) is displayed on the LCD panel.

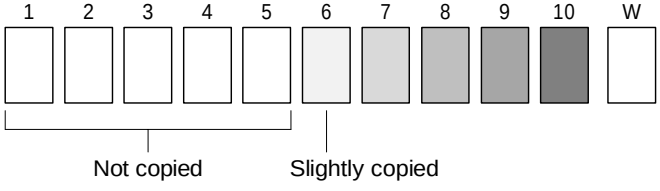
② Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied. (0.5 of UKOG-0089FCZZ is clearly copied.)

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



③ When the copy density is within the specified range, press the dark exposure key to set to Photo mode 5.

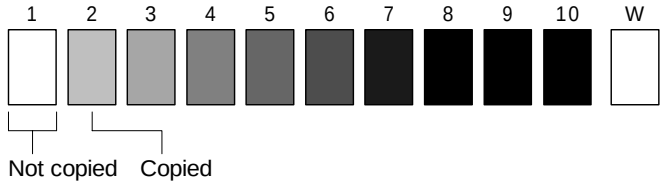
④ Make a copy.

Check that "2" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is clearly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



B. Photo mode adjustment

① Press the exposure select key to set to the photo mode.

Check that "1" of the photo mode is displayed on the LCD panel.

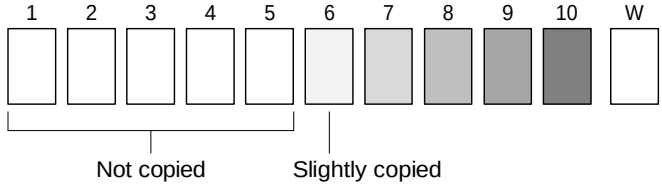
② Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied. (0.5 of UKOG-0089FCZZ is clearly copied.)

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



③ If the copy density is within the specified range, press the dark exposure key to set to photo mode 5.

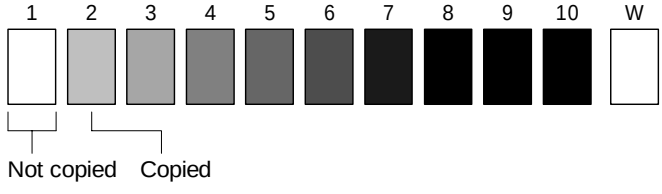
④ Make a copy.

Check that "2" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is clearly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



C. Auto exposure (AE) mode adjustment

(1) Auto exposure (standard mode) adjustment

① Press the exposure select key to set to the auto exposure mode.

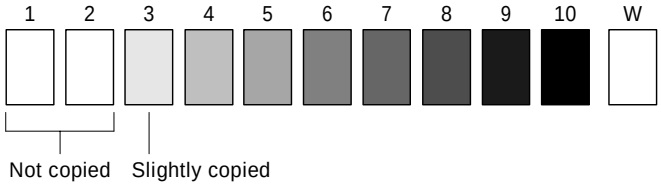
② Make a copy.

Check that "3" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is slightly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



(2) Auto exposure (toner save mode) adjustment

① Check that the mode is the auto exposure mode. Press the message forward scroll key (→) and check that the toner save mode is displayed on the LCD panel.

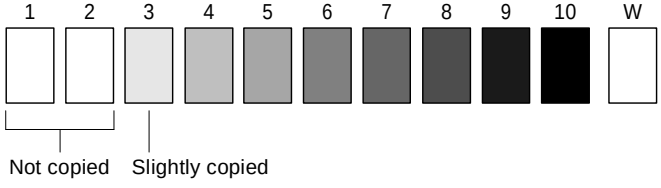
② Make a copy.

Check that "3"of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is slightly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

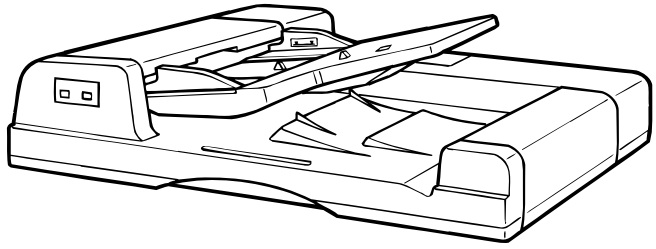
<When too dark> Make the value displayed on the copy quantity display greater.

∗ The range of set values is 450 ~ 800.



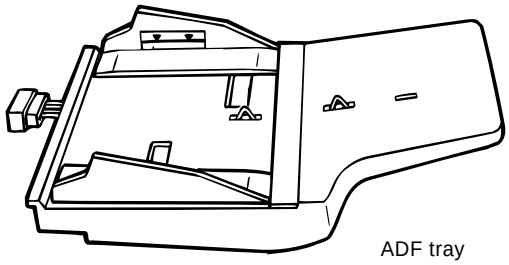
15. Installation of options

(1) SF-A55

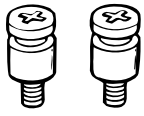


SF-A55

Included parts



ADF tray



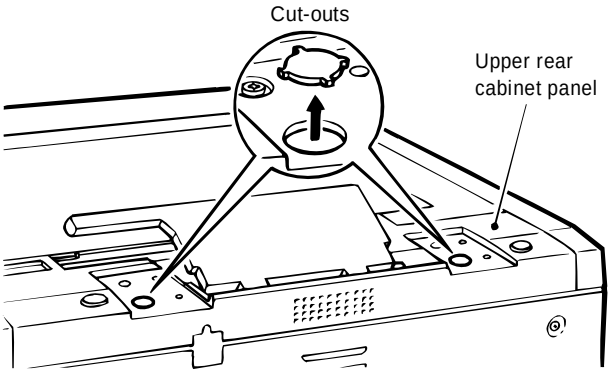
ADF mounting screws (2pcs.)

ADF securing screws (2pcs.)

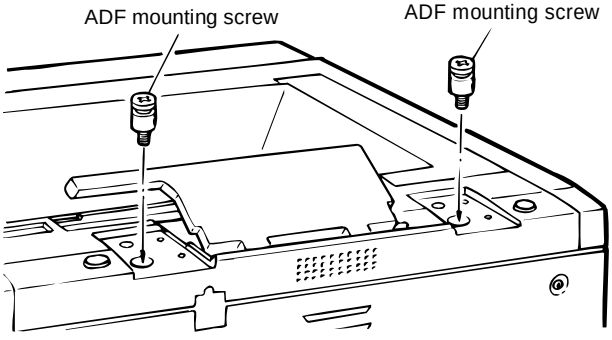
Unplug the copier and follow the procedure below.

1. Mount the ADF onto the copier.

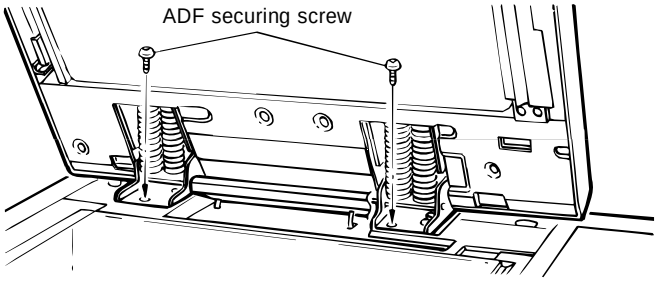
Remove the 2 cut-outs from the upper cabinet panel of the copier.

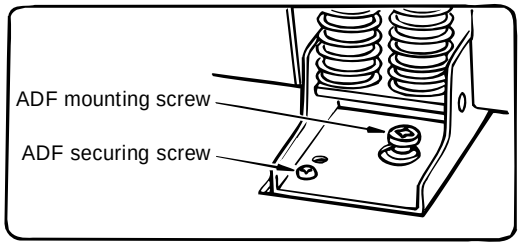


Install the 2 ADF mounting screws.



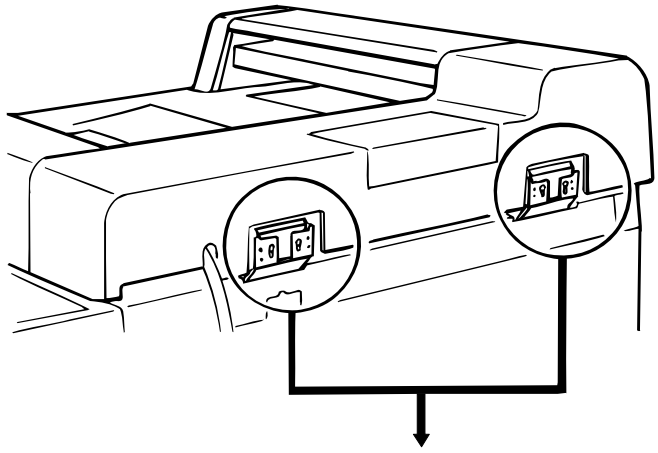
Fit the holes in the hinges of the ADF onto the ADF mounting screws and secure the ADF with the two ADF securing screws.

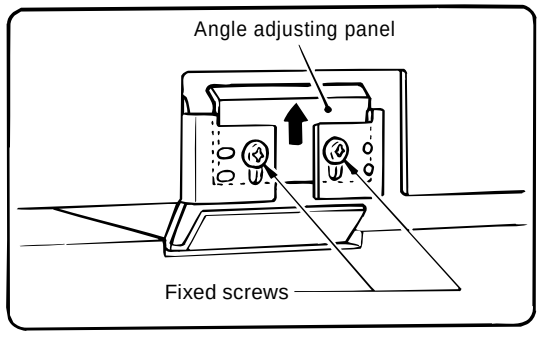




2. Adjust the angle of ADF.

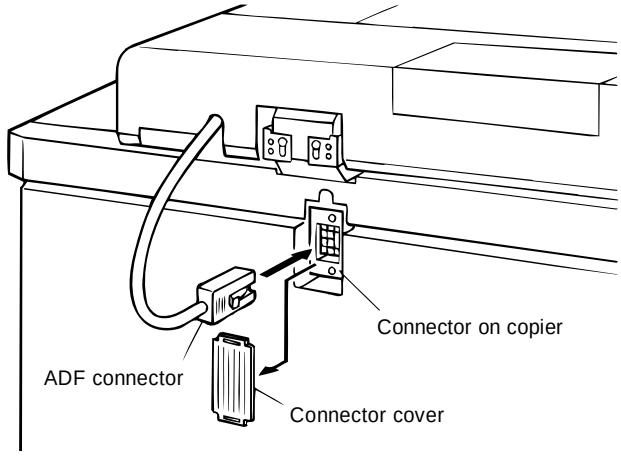
Loosen the two fixed screws for the angle adjusting panel which locate on the hinge angle and then fasten the loosened screws while raising the angle adjusting panel completely.





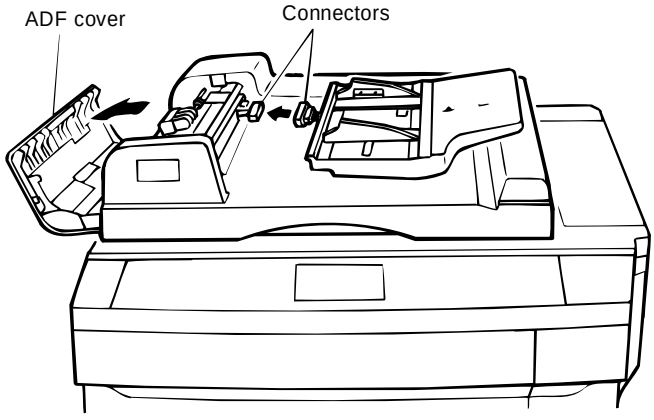
3. Connect the ADF connector.

Remove the connector cover from the copier's rear cabinet panel. Next, connect the ADF connector to the connector on the copier.



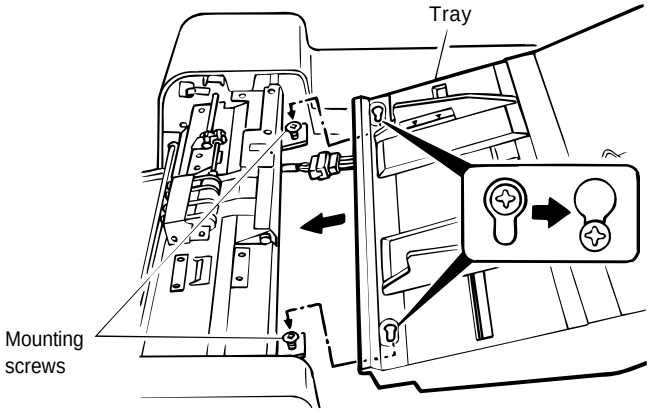
4. Connect the ADF tray connector.

Open the ADF cover and connect the ADF connector to the tray connector.



5. Affach the tray.

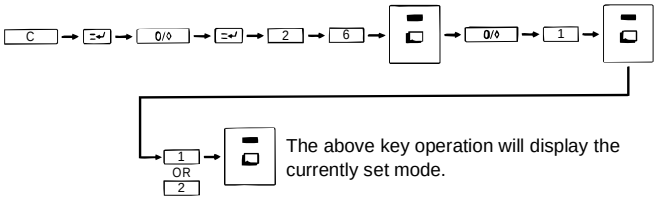
Loosen the two mounting screws and secure the tray with the screws as shown in the figure.
Close the ADF cover.



Plug the copier into a grounded outlet and turn the power switch on. Then, follow the procedure below.

6. Set the mode.

Operate the keys on the copier to set the mode.



SIMULATION No. 26-1
SORTER/STAPLE SORTER SETTING?
1. YES 2. NO

SIMULATION NO. 26-1
OPTION SETUP.

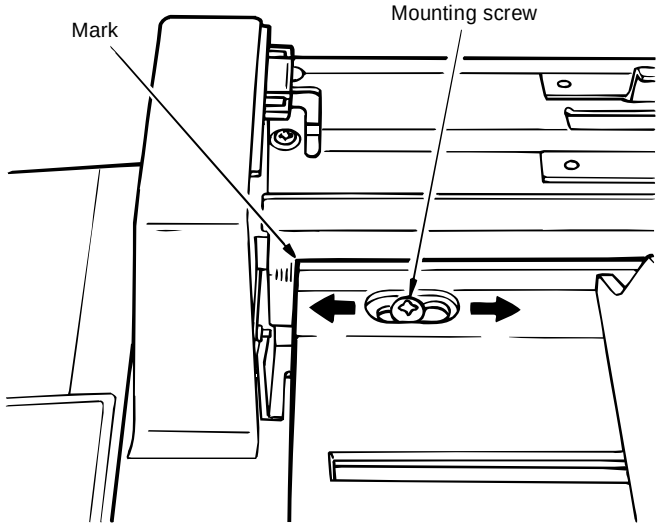
CODE	:	RADF	SORTER/STAPLE SORTER
1	:	○	○
2	:	○	×
3	:	×	○
4	:	×	×

○: SETTING ×: NO SETTING

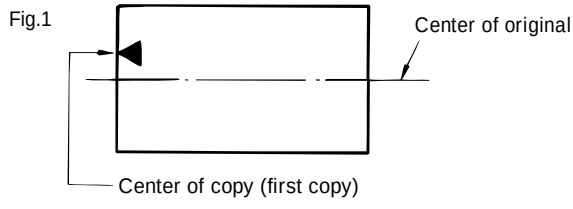
PLEASE SELECT BY 10-KEY PAD.

7. Adjust the center of the copy.

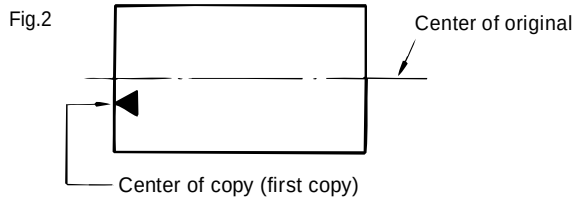
Set the original on the tray and make a copy. When the copy slips out of the center as Fig. 1 or Fig. 2, open the ADF cover, loosen the two mounting screws and adjust the tray to correct position.



★ Fig. 1
Move the tray in the direction A and secure it with the two mounting screws. Make sure that it is centered properly.

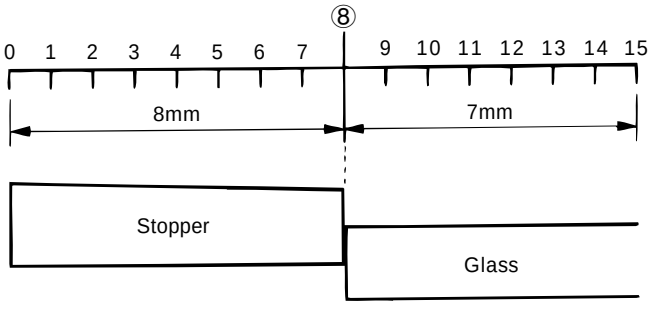


★ Fig. 2
Move the tray in the direction B and secure it with the two mounting screws. Make sure that it is centered properly.



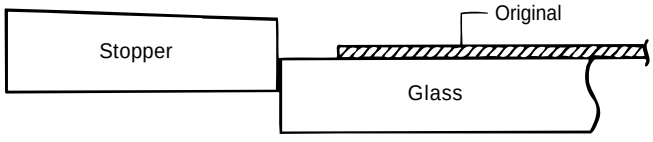
8. Original lead edge position adjustment.

- The original lead edge position for RADF can be determined using the test command 53.
- For it had been factory set that the lead edge should stop on the location 8, but it may be needed to make adjustment. It can be adjusted within a range of 8mm (8 steps) at the stopper side and 7mm (7 steps) at the glass side. Adjustment can be done for each mode of single sided, double sided, and light weight paper.

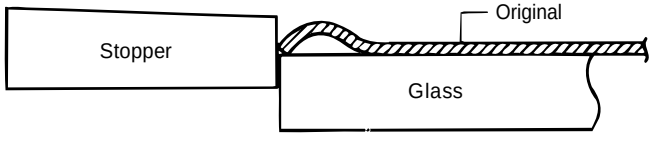


- **Setup example**

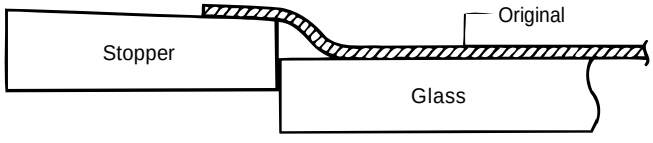
① If the lead edge of the original was still not to the stopper, enter an optimum value.



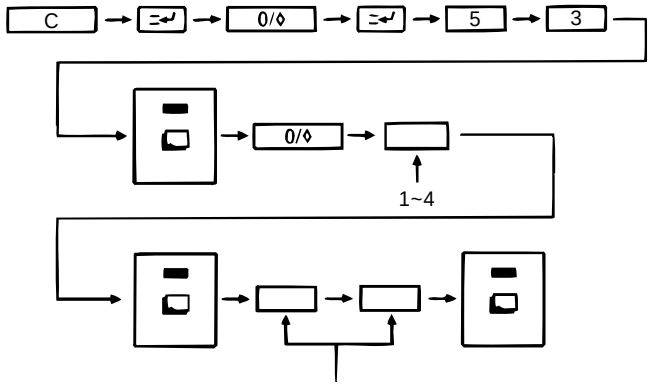
② If the image at the lead edge of the original were to deform, enter an optimum value to move to the glass side.



③ If the original were to override the stopper, enter an optimum value to move it to the glass side.



- After finished selecting settings using test command 53; the screen shown in the illustration bellow will appear. Select one of the numbers from this screen then use the 10-key pad to enter a setting for items #1 through #15.



Set to between 0 and 15 as dictated by the copier's performance. The factory setting is "8".

SIMULATION No. 53

01 ~ 04: ORIGINAL STOP POINT SETUP.

	NOM ☐	THIN ☐	SIMP	DUP
1	*		*	
2	*			*
3		*	*	
4		*		*

05 ~ 06: (NO PROGRAM)

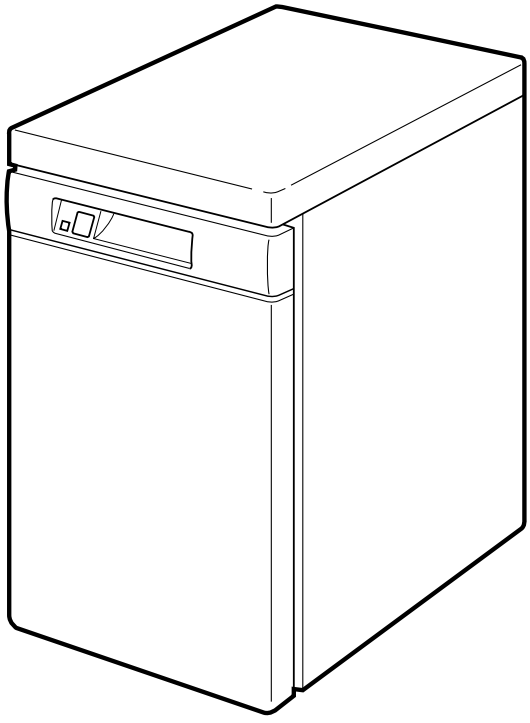
07 ~ 10: RADF SENSOR ADJUSTMENT.

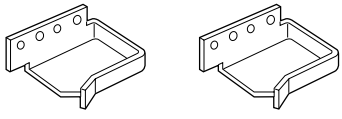
07.REGIST 08.TIMING

09.EXIT REVERSAL 10.EMPTY

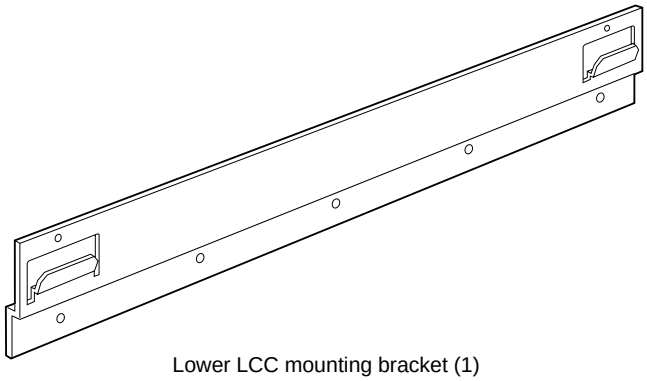
(2) SF-C52

Included parts

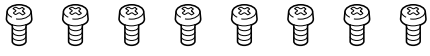




Upper LCC mounting brackets (2)



Lower LCC mounting bracket (1)

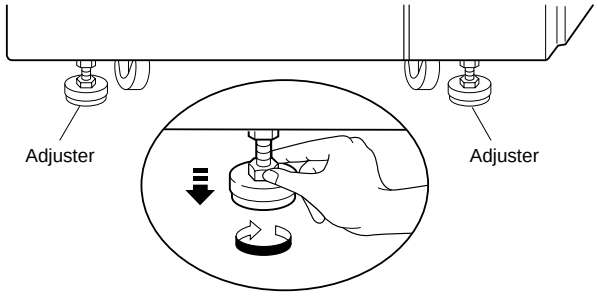


M4 x 8 securing screws (8)

Disconnect the plug to the main copier unit before performing the following procedures.

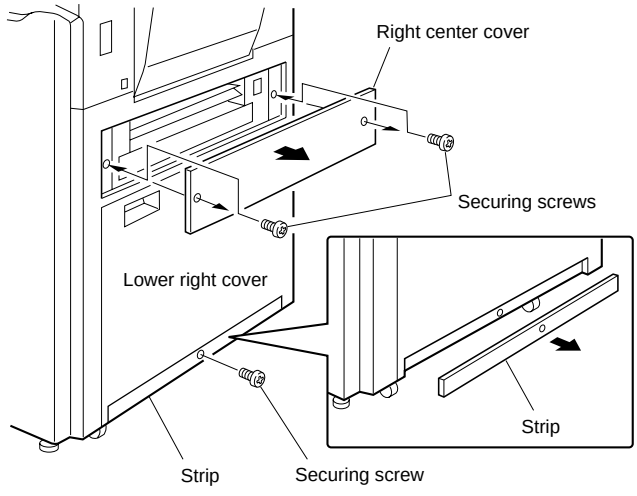
1. Using the adjusters to stabilize the main copier unit

To stabilize the main copier unit, lower the two adjusters on the front of the main unit of the copier until they reach the floor.



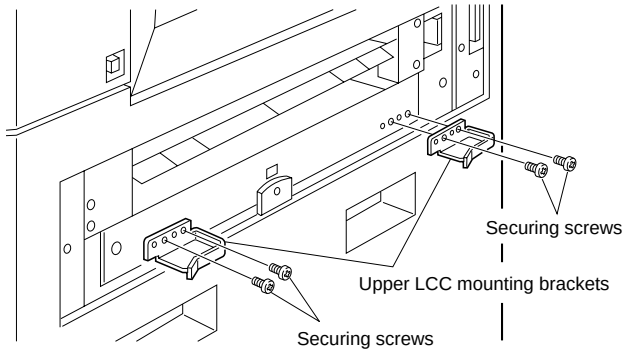
2. Removing the right center cover and the strip beneath the lower right cover

Remove the two securing screws which hold the right center cover in place, then remove the right center cover. Thread the two securing screws back into the holes from which they were removed.
Next, remove the securing screw which holds the strip beneath the lower right cover in place.
Then, remove the strip.

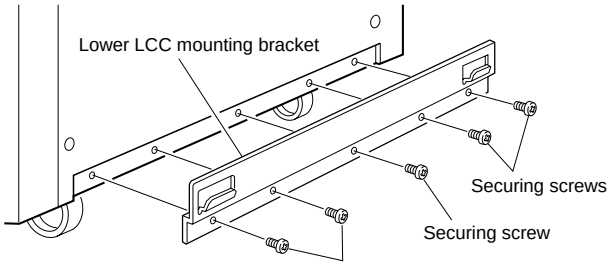


3. Mounting the upper and lower LCC mounting brackets

Mount the two upper LCC mounting brackets to the main copier unit using two M4 x 8 securing screws for each bracket.



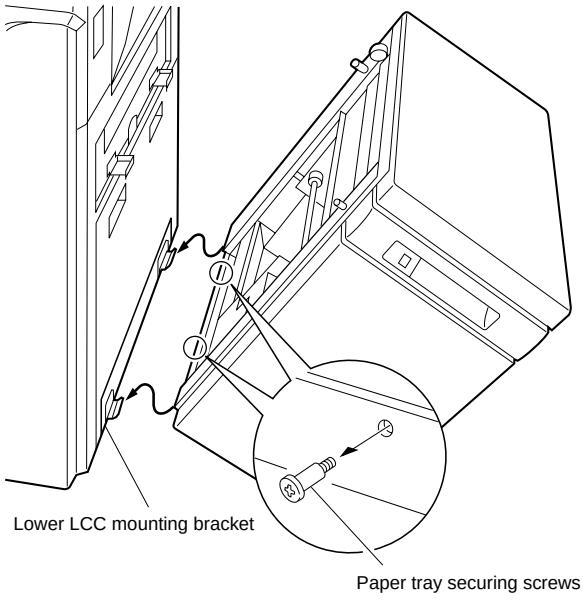
Next, mount the lower LCC mounting bracket to the main copier unit using five M4 x 8 securingscrews.



The securing screw which had held the strip in place beneath the lower right cover (removed in step 2) should be one of the five securing screws used to mount the lower LCC mounting bracket.

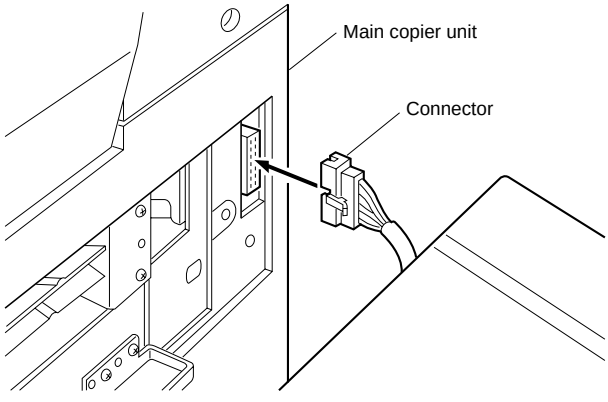
4. Hooking the large capacity tray to the main copier unit

Note: Be sure to remove the two paper tray securing screws before hooking the large capacity tray to the main copier unit.
Hook the mounting fixtures on the large capacity tray to the projections on the lower LCC mounting bracket on the main copier unit.



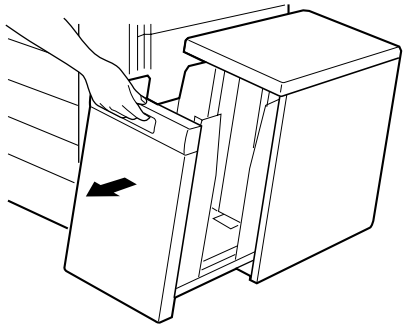
5. Plugging in the large capacity tray's connector

Plug the connector from the large capacity tray into the connector on the main copier unit.

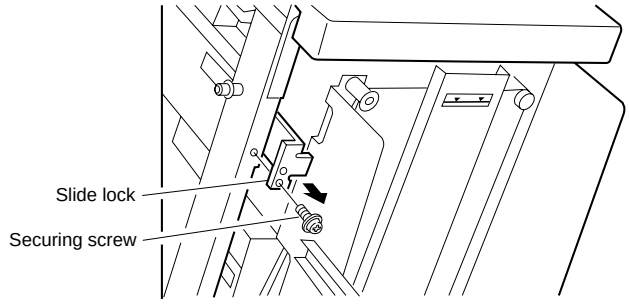


6. Pulling out the slide lock on the large capacity tray

Gently pull out the large capacity tray's paper tray as far as it will go.



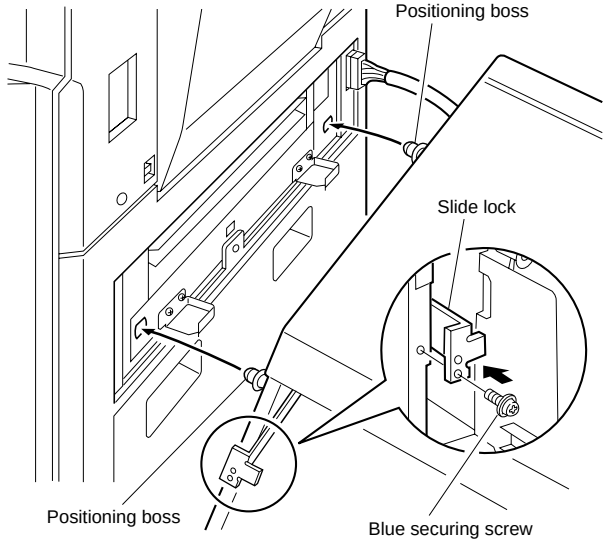
Remove the blue securing screw which holds the slide lock in place, then pull the slide lock out as far as it will go.



7. Mounting the large capacity tray to the main copier unit

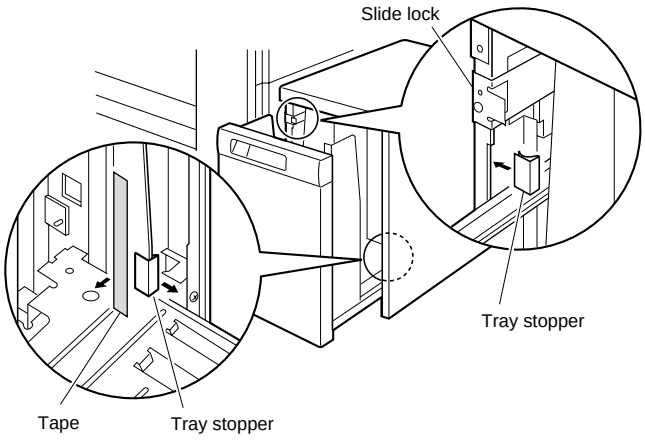
Insert the positioning bosses on the large capacity tray into the positioning holes on the main copier unit.
Next, push the slide lock back to its original position and secure it using the blue securing screw that was removed in step 6.

∗ Securing the slide lock in this position locks the large capacity tray to the main copier unit.

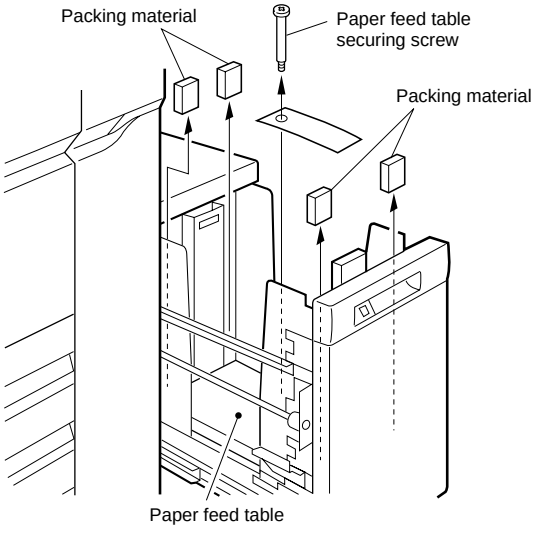


8. Removing the tray stopper as well as the securing screw and the packing material which hold the paper feed table in place.

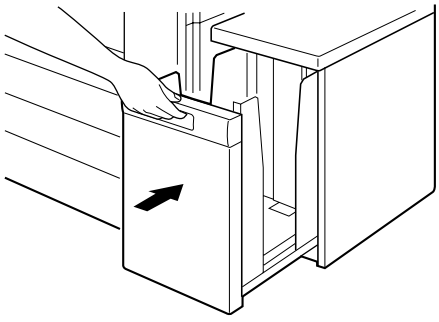
The tray stopper is taped to the paper tray.
Remove the tape, and then remove the tray stopper.
For safekeeping of the tray stopper, slip it over the frame beneath the slide lock as shown in the illustration.



Remove the securing screw and the four pieces of packing material which hold the large capacity tray's paper feed table in place.

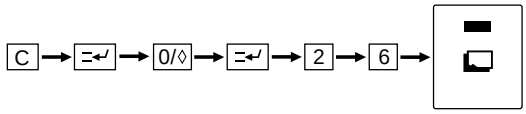


Gently push the paper tray back in to its original position.



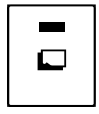
9. Setting modes and paper size

Set modes and paper size using the keys on the main copier unit.



When the keys shown above are pressed in the indicated sequence, the screen shown below will be displayed.

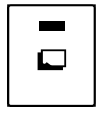
```
SIMULATION NO. 26
INPUT 1~7
1. OPTION SETUP.
2. LCC SETUP.
3. AUDITOR/COIN VENDOR SETUP.
4. (NO PROGRAM)
5. COUNTER MODE SETUP.
6. DESTINATION SETUP.
7. DRUM SENSITIVITY SETUP.
```

Press 2 , then  . The copier will enter LCC setup mode.

The LCC size options will appear in the message display.

```
SIMULATION NO. 26-2

SELECT LCC TYPE.
0. NC LCC
2. A4
3. B5
```

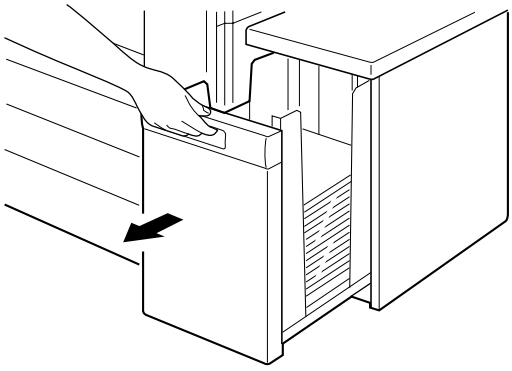
Press 1 , then  . This completes setting of modes and paper size.

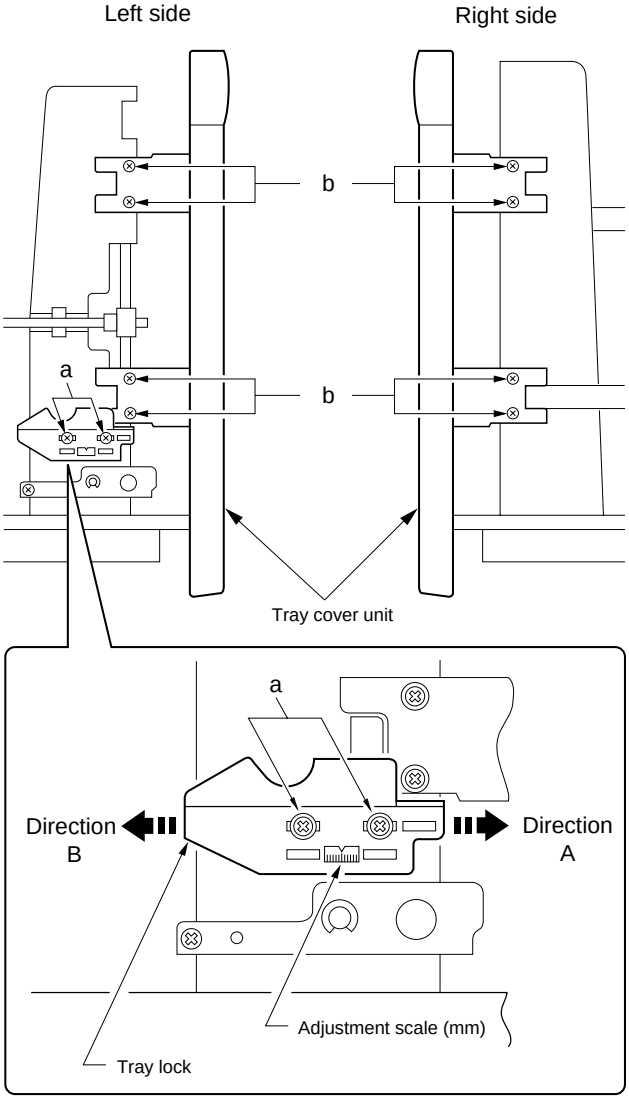
or

2

10. Centering the paper

The paper tray is adjusted at the factory, so there should be no need to center the copy paper yourself. If such an adjustment is necessary, however, follow the procedures described below.





Make a copy. If it comes out off center as shown in either figure 1 or figure 2 below, gently pull out the paper tray as far as it will go.
Next, loosen the two securing screws (a) holding the tray lock in place and the eight securing screws (b) on the left and right sides holding the tray cover unit to the frame, then follow one of the procedures described below to center the paper.

- When copies come out off center as shown in figure 1
  Move the tray lock in direction A the same number of millimeters as the paper is off center, tighten first the two "a" securing screws then the eight "b" securing screws, then make another copy to check whether the copies come out properly centered.

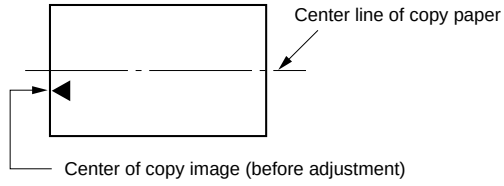


Fig. 1

- When copies come out off center as shown in figure 2
  Move the tray lock in direction B the same number of millimeters as the paper is off center, tighten first the two "a" securing screws then the eight "b" securing screws, then make another copy to check whether the copies come out properly centered.

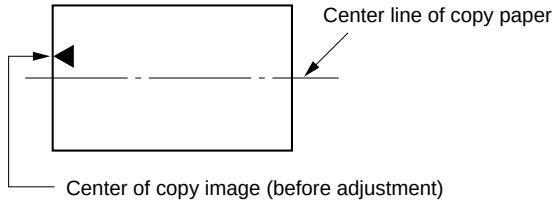
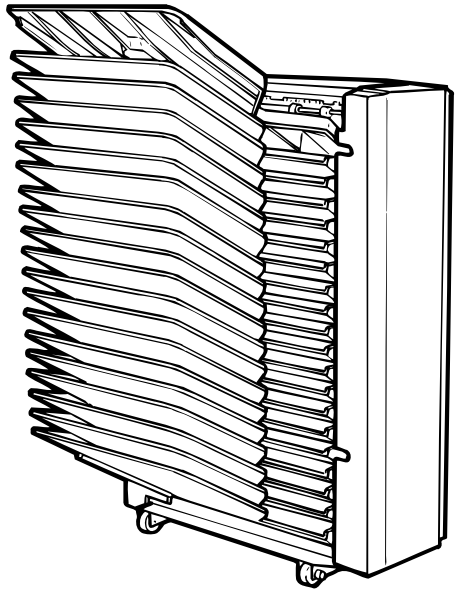
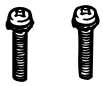


Fig. 2

(3) SF-S53

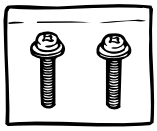




Rail mounting plate screws (M4 X 14): 2

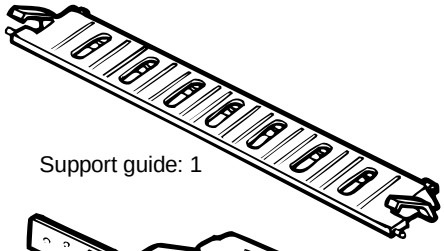
Rail screws A (M4 X 6): 2

Rail screw B (M4 X 6): 1

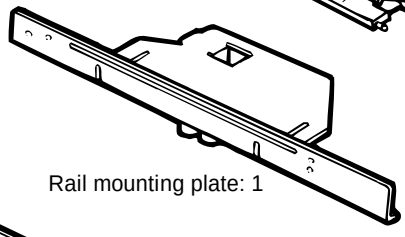


Rail mounting plate screws (M4 X 16): 2

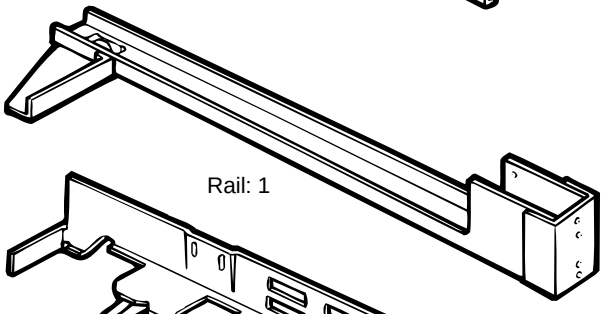
Bracket screws (M4 X 10): 2



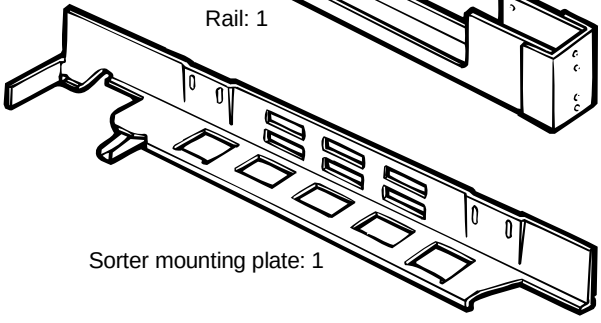
Support guide: 1



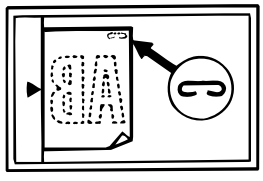
Rail mounting plate: 1



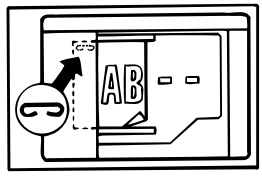
Rail: 1



Sorter mounting plate: 1

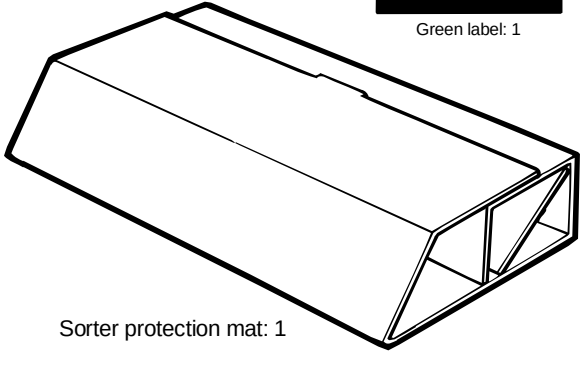


Stapling location label A: 1



Stapling location label D: 1

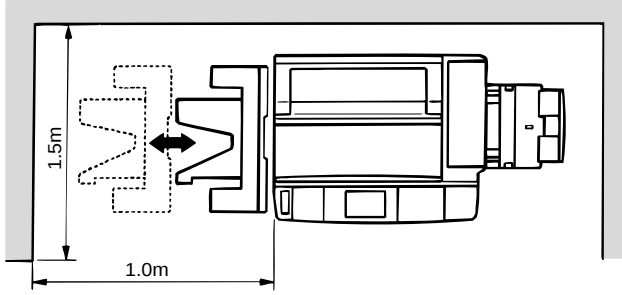
Green label: 1



Sorter protection mat: 1

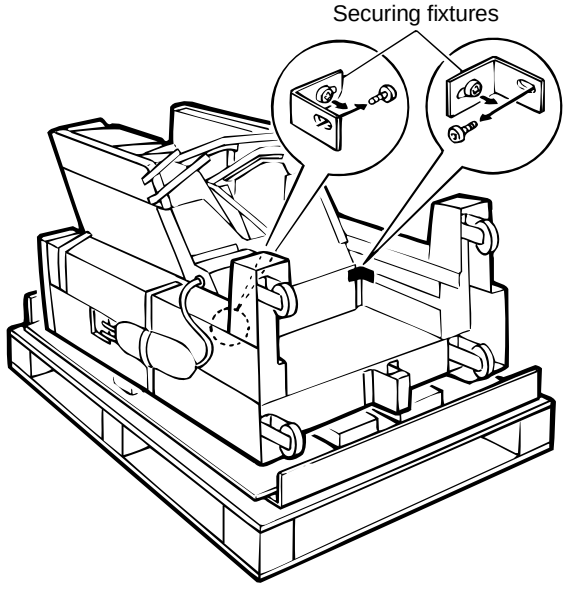
Before installing

Be sure that you have plenty of room around the copier for work space.

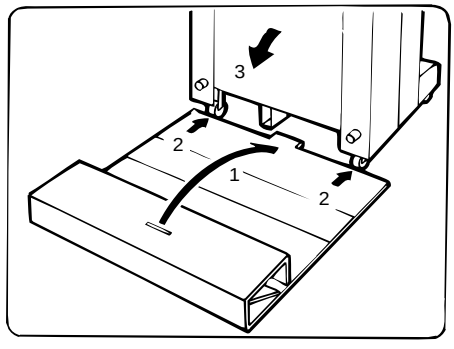


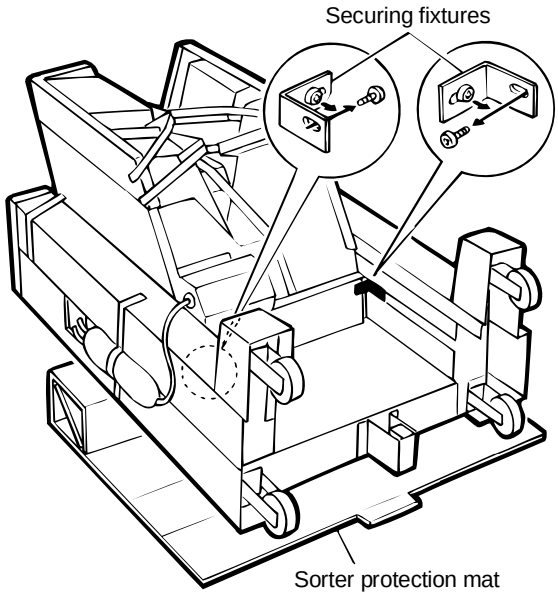
Remove the securing fixtures

★ When performed on the skid
Remove the 2 securing fixtures.

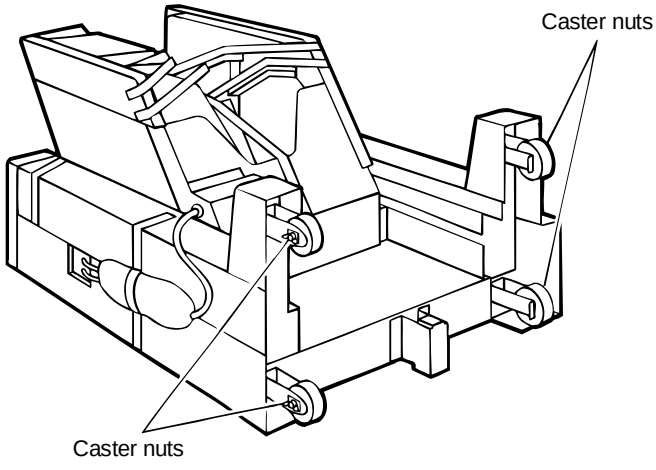


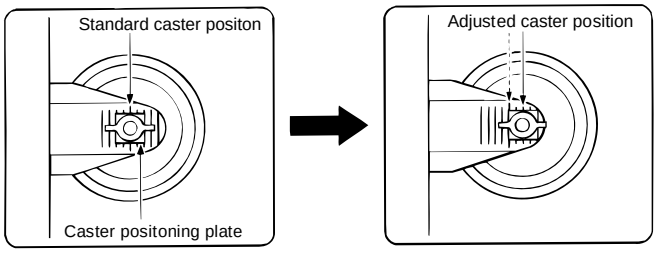
★ When not performed on the skid
Open the sorter protection mat, as shown in the figure, and position it against the sorter's caster. Lay the sorter down on the protection mat.
Next, remove the 2 securing fixtures.





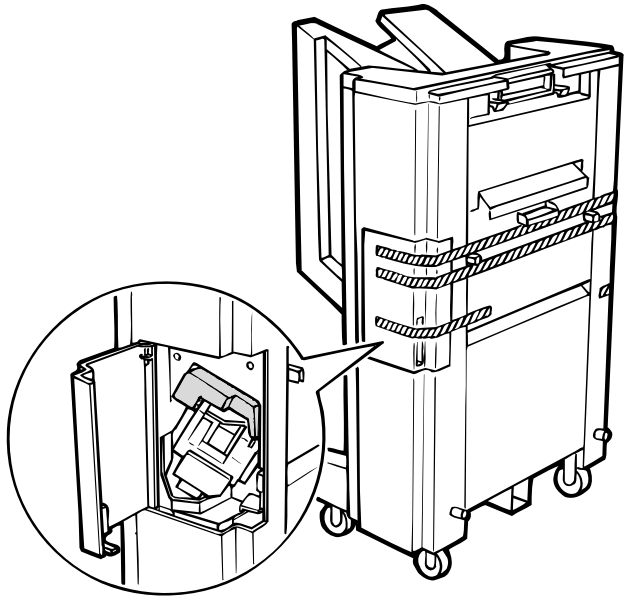
Adjust the position of the casters.

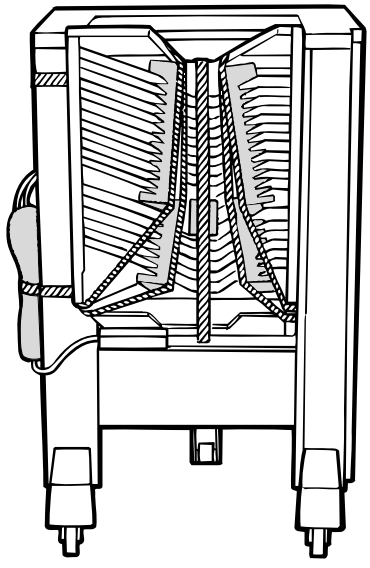




Loosen the caster nuts (4) and shift the caster positioning plates two notches, as shown in the illustration.

Remove all the securing tape ( ) and securing materials ( ) shown in the figures below.



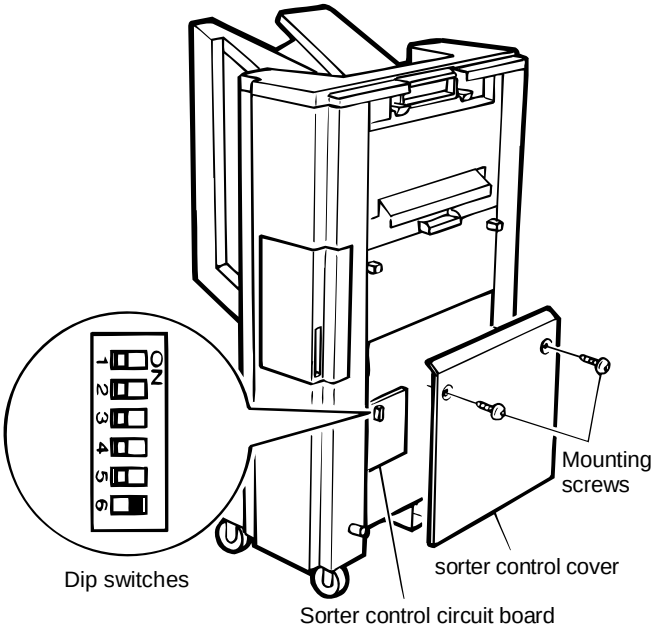


Move dip switch to "ON."

Remove the 2 mounting screws securing the sorter control cover, then remove the sorter control cover.

Next, move dip switch number 6 to the "ON" position (the dip switches are attached to the sorter controller circuit board).

Reattach the sorter controller cover in its original position and secure it with the 2 mounting screws.



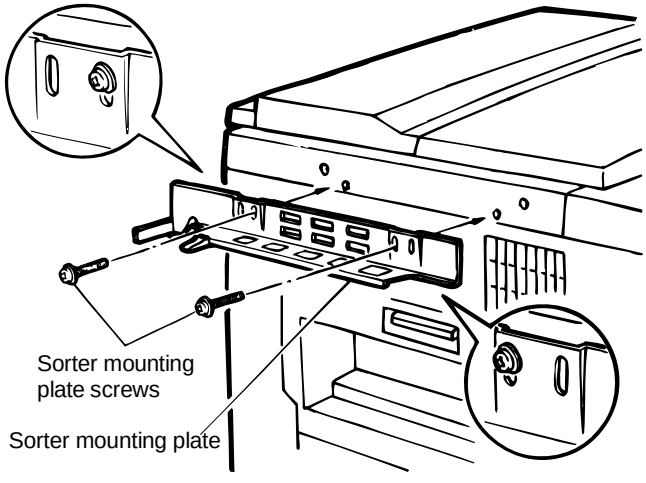
Unplug the copier's power cord before carrying out the following procedure.

A. Mounting of the staple sorter onto the copier.

1. Attach the sorter mounting plate.

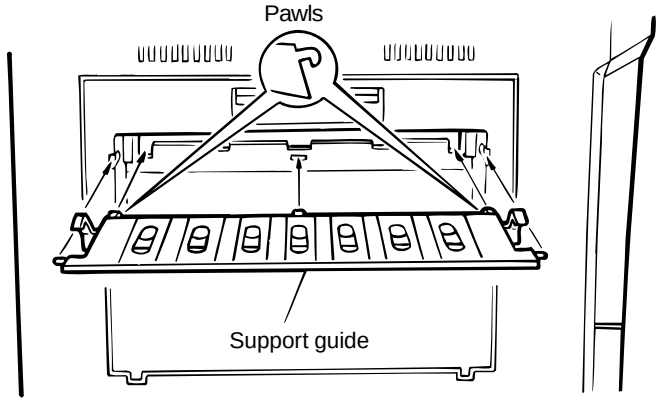
Attach the sorter mounting plate with the 2 sorter mounting plate screws (M4 x 16).

The sorter mounting plate screw holes are elongated; tighten the screws so that the sorter mounting plate hangs down in its lowest position.



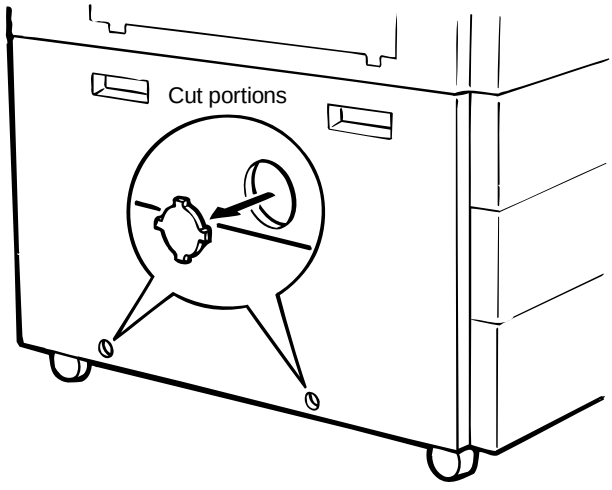
2. Attach the support guide.

Attach the support guide by attaching its pawls (2 locations) to the inside of the copier's paper output section.



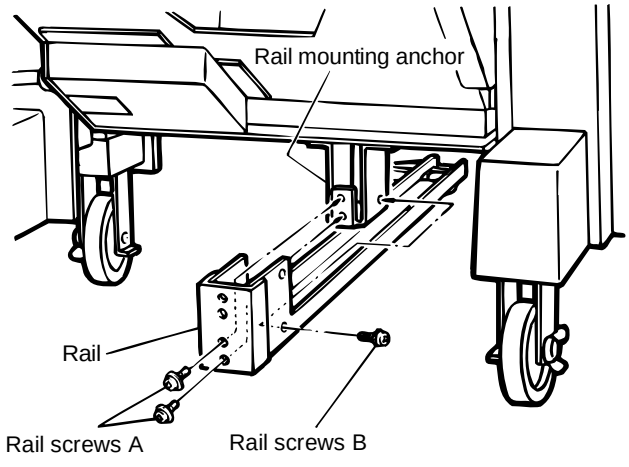
3. Cut off the cut portions of the desk's left cabinet panel.

Remove the cut-outs (2) from the lower part of the copier's left cabinet panel.



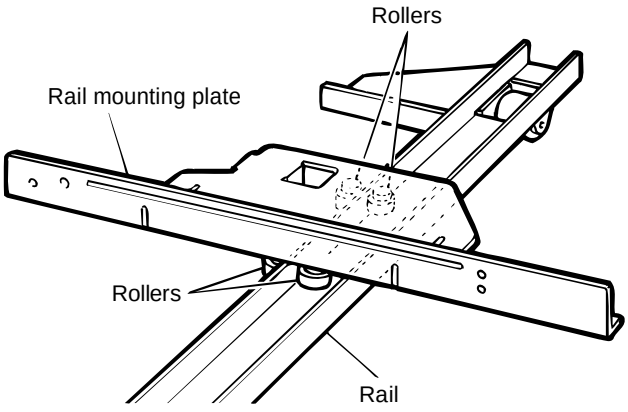
4. Attach the rail to the sorter.

Insert the rail into the rail mounting anchor, on the bottom of the sorter, and attach them with the 2 rail screws A (M4 x 6) and 1 rail screw B (M4 x 6).



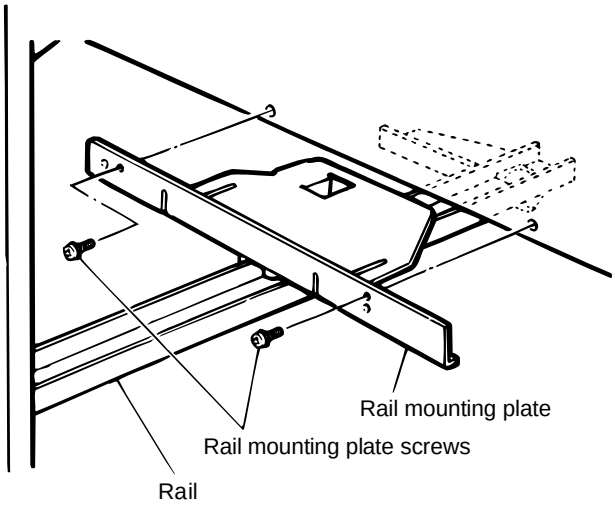
5. Fit the rail mounting plate onto the rail.

Insert the rail between the rollers on the rail mounting plate as shown in the figure.



6. Attach the rail mounting plate to the copier.

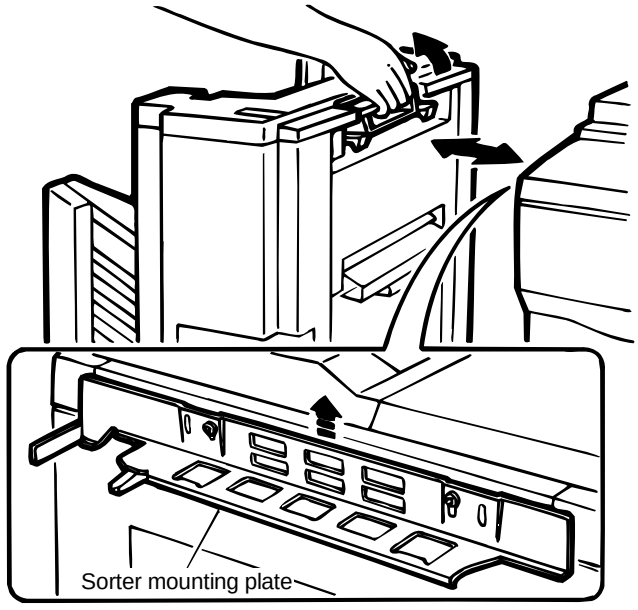
Run the rail, which is attached to the sorter, underneath the copier as shown in the illustration, then attach the rail mounting plate to the copier using the M4 x 14 rail mounting plate screws (2).



7. Confirm that the staple sorter can be attached and detached correctly.

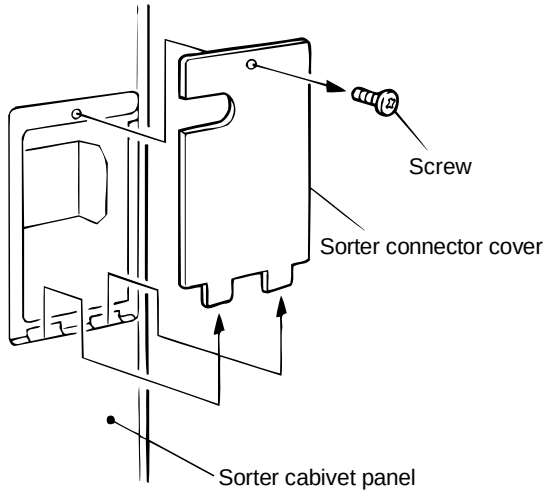
① Latch and unlatch the staple sorter from the copier to confirm that it moves smoothly.

② Confirm that the staple sorter locks into place beside the copier. If not, adjust the height of the sorter mounting plate until the staple sorter locks securely into place.



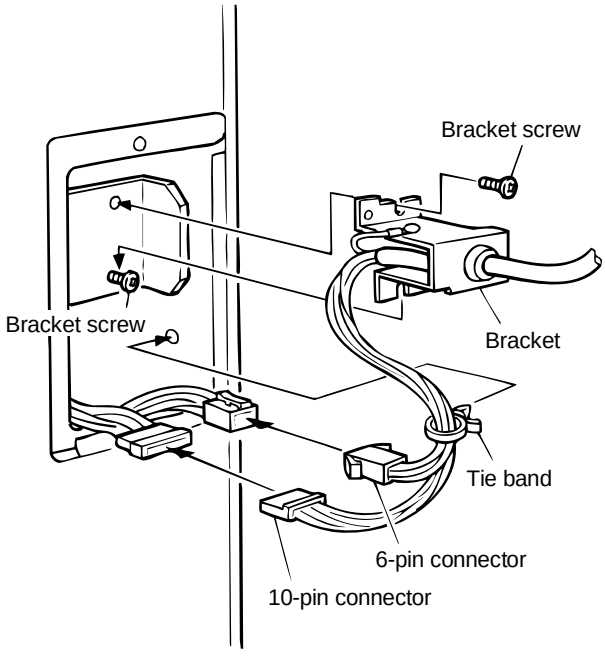
8. Remove the sorter connector cover.

Remove the screw which holds the sorter connector cover to the copier's rear cabinet panel, then remove the sorter connector cover.



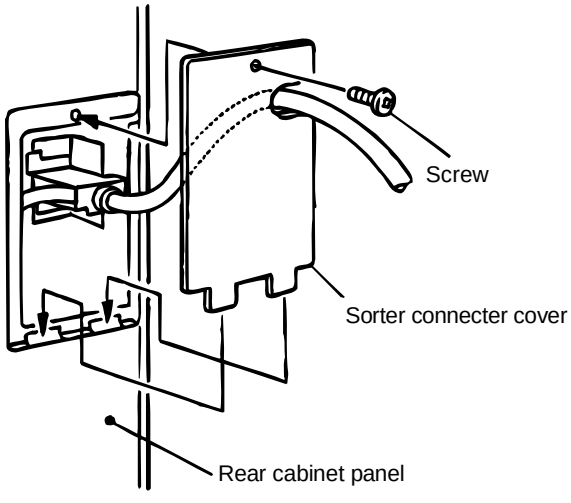
9. Attach the sorter connectors.

Loosely screw in 1 of the 2 supplied bracket screws as shown in the figure. Hook the bracket in place over this screw, then insert the remaining bracket screw and tighten both screws securely.
Next, connect the 6-pin and 10-pin connectors from the sorter to the 6-pin and 10-pin connectors of the copier and insert the tie band into the hole under the installation part.



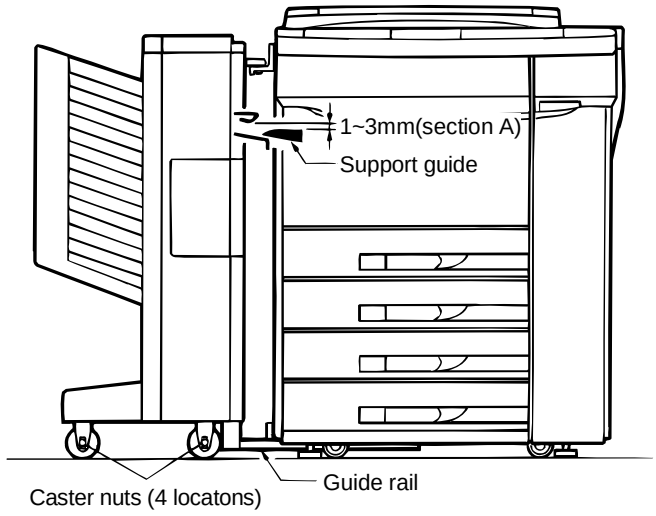
10. Remove the sorter connector cover.

Reinsert into the copier's rear cabinet panel, as shown in the illustration, the sorter connector cover which was removed in step 8, then secure it with the screw.



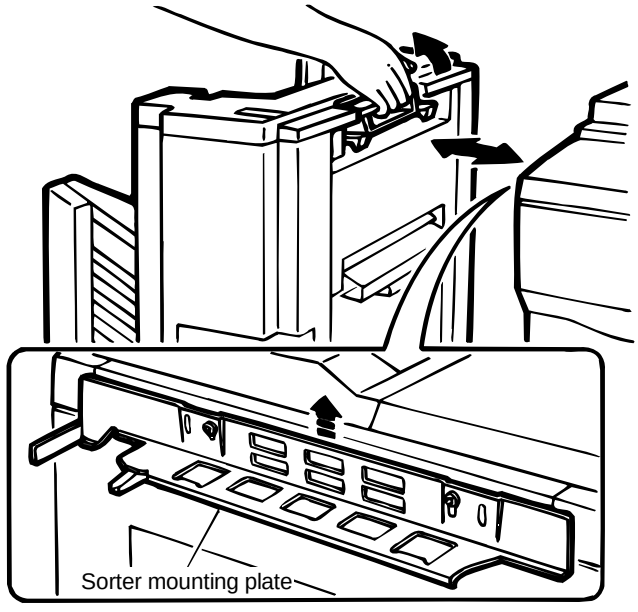
11. Make sure the copier's paper output section is properly aligned with the sorter's paper feed section.

① Check to be sure the copier's paper output section is properly aligned with the sorter's paper feed section, as shown in section A of the illustration.
If the gap at section A of the illustration is reduced due to an uneven floor, postcards, in particular, tend to jam in the sorter's paper feed section. In such a circumstance, loosen the caster nuts (4 location) to adjust the height of the casters.



② Latch and unlatch the staple sorter to and from the copier several times to be sure the staple sorter moves smoothly.

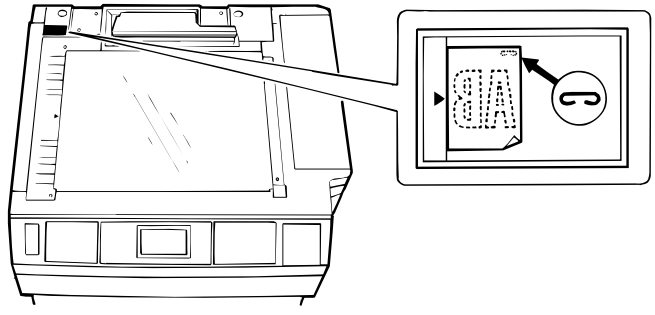
③ Check to be sure the staple sorter latches onto the copier.
If the staple sorter will not latch, raise the sorter mounting plate, which is attached to the copier, to a height at which the staple sorter latches onto the copier.

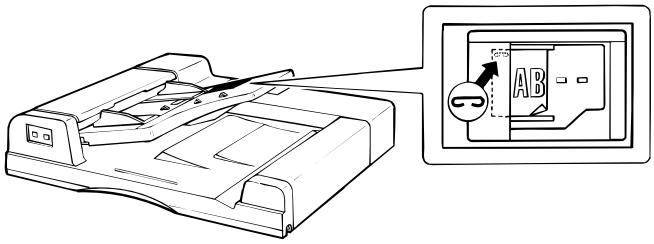


12. Affix the stapling location labels.

Affix the stapling location labels to the copier and RADF (SF-A55) as shown in the figure.

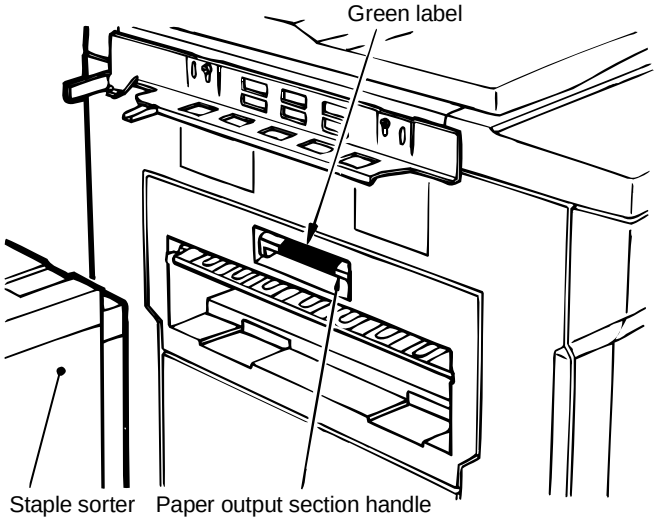
★ Copier





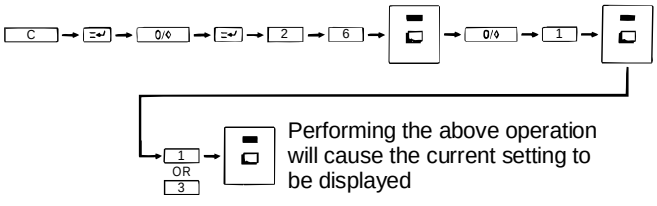
13. Affix the green label.

Lifting up on the staple sorter's release lever, separate the sorter from the copier.
Next, affix the green label to the paper output section handle as shown in the figure.
Holding the staple sorter's release lever, return the sorter to its original position. At this time, confirm that the staple sorter locks securely into place beside the copier.
Plug the copier's power cord into an electric outlet, switch on the power, and then perform the following procedure.



14. Set the mode.

Perform the following key operations on the copier to set the mode.



Performing the above operation will cause the current setting to be displayed.

SIMULATION No. 26-1
SORTER/STAPLE SORTER SETTING?
1. YES 2. NO

B. Staple sorter operation check

1. Check the sort mode.

Make 20 copies in the sort mode and confirm that the copies are distributed to the sort bins with no abnormal noises from the sorter.

2. Check the non-sort mode.

Make copies in the non-sort mode and confirm that they are sent to the non-sort bin.

3. Use the RADF (reversing automatic document feeder) and check the staple sort mode.

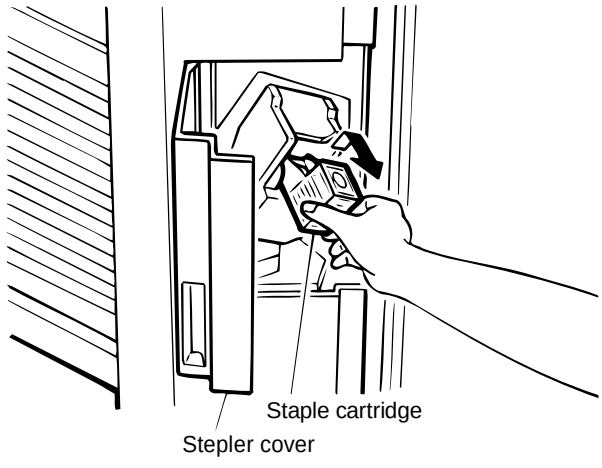
Place 2 or more sheets in the RADF and make copies in the staple sort mode. Confirm that the copies are distributed to the sort bins, that the staple guide bar arranges the copies and that the stapler functions properly.

If at this time the copies have not been stapled or the stapler is jammed, adjust the staples by performing one of the following procedures.

If copies have not been stapled

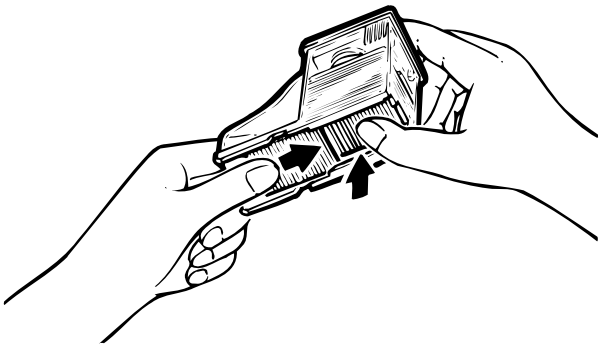
1. Remove the staple cartridge.

Open the stapler cover, lift up on the staple cartridge and remove it by pulling in the direction of the arrow.



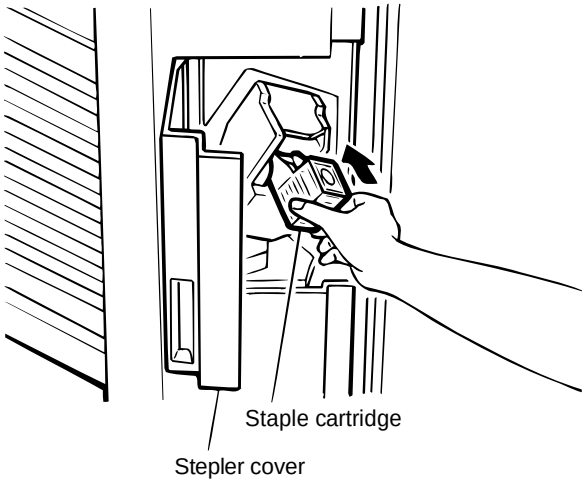
2. Check the staple cartridge.

Confirm that the sheets of staples in the cartridge are properly stacked.
If not, slide the staples back in the direction of the arrow while pressing in gently on the bottom of the cartridge.



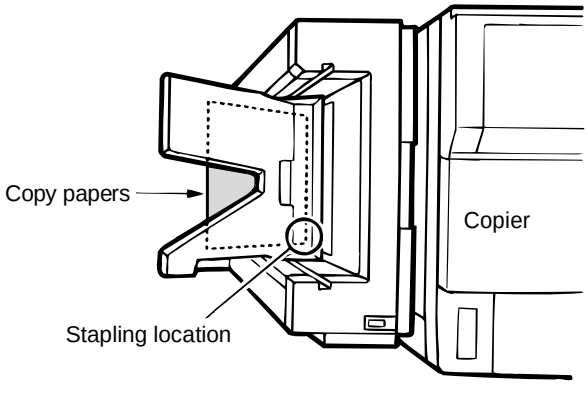
3. Reinsert the staple cartridge.

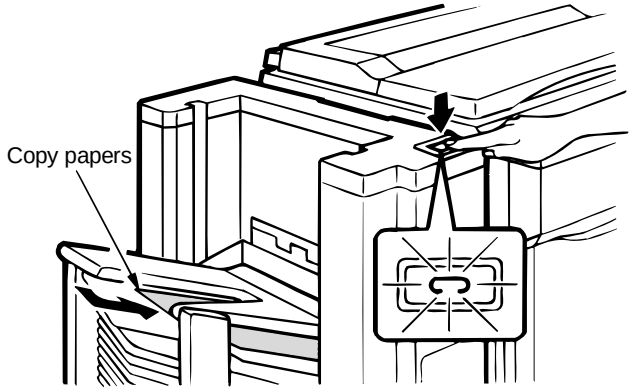
Push the staple cartridge in horizontally until it clicks securely into place.
Then close the stapler cover.



4. Confirm that papers are stapled correctly.

Place a set of papers in the 2nd bin (below the non-sort bin), check the stapling location, and then press the manual staple key when it lights up.
Next, remove the papers that were placed in the 2nd bin and confirm that they have been stapled correctly.
At this time, if the papers still have not been stapled, repeat this procedure once again.



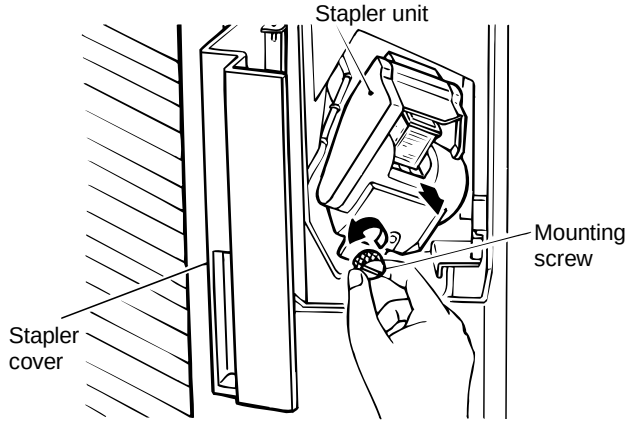


This completes the staple sorter installation.

If staples have become jammed

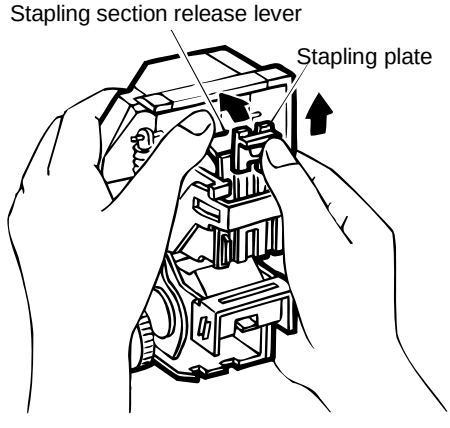
1. Remove the stapler unit.

Open the stapler cover and loosen the mounting screw that secures the unit in place until there is no more resistance.
Next, remove the stapler unit.



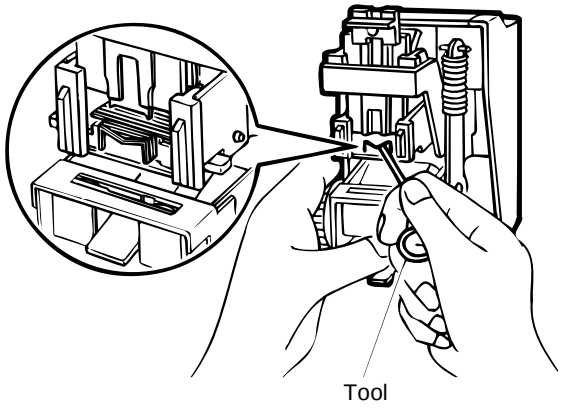
2. Open the stapling section.

Open the stapling section by pushing up on the stapling plate while pressing on the stapling section release lever.



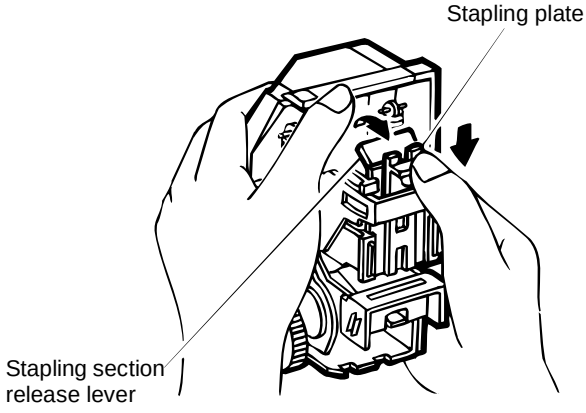
3. Remove the jammed staples.

Remove the jammed staples with the supplied tool as shown in the figure.
This tool can be found on the inside of the stapler unit cover.



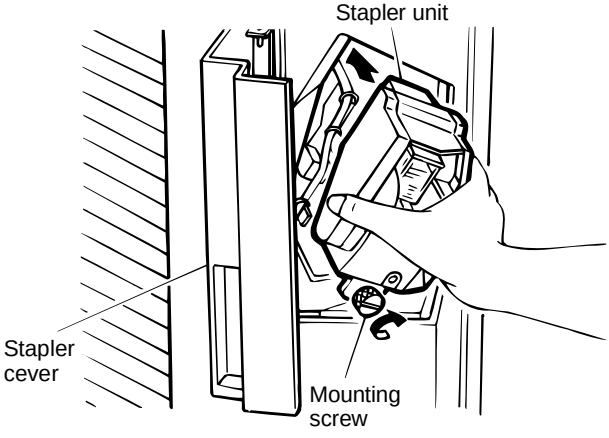
4. Close the stapling section.

Press down on the stapling plate and return it to its original position.
Next, return the stapling section release lever to its original position.



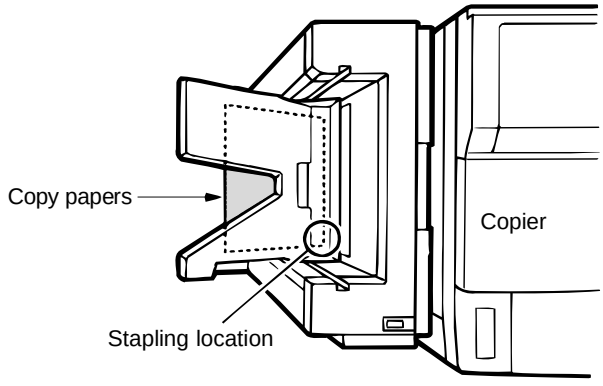
5. Reinstall the stapler unit.

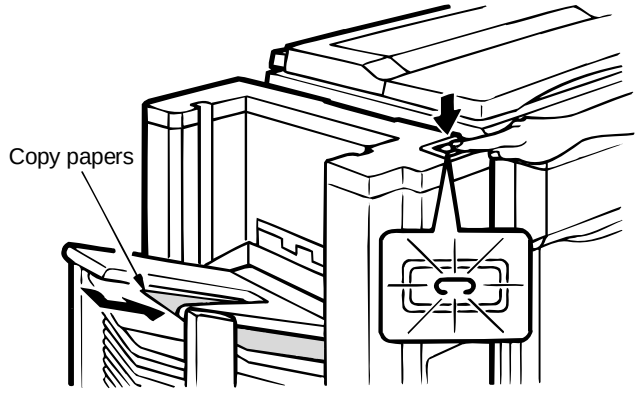
Reinstall the stapler unit in its original location using the mounting screw to attach it tightly in place.
Then close the stapler cover.



6. Confirm that papers are stapled correctly.

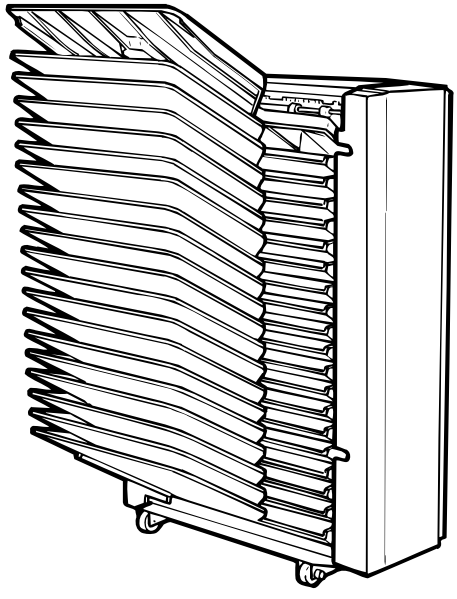
Place a set of papers in the 2nd bin (below the non-sort bin), check the stapling location, and then press the manual staple key when it light up.
Next, remove the papers that were placed in the 2nd bin and confirm that they have been stapled correctly.
At this time, if the papers still have not been stapled, repeat this procedure once again.

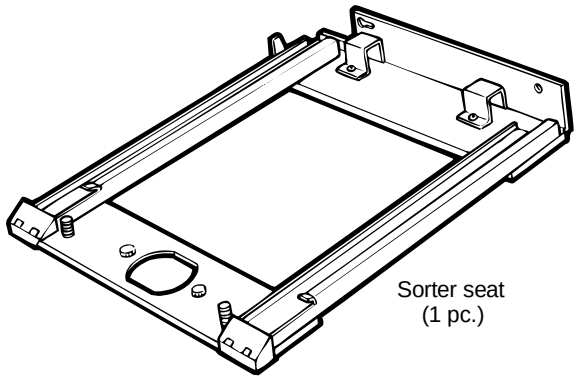


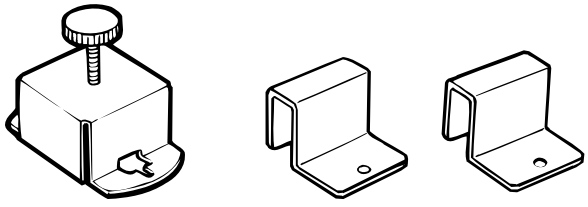


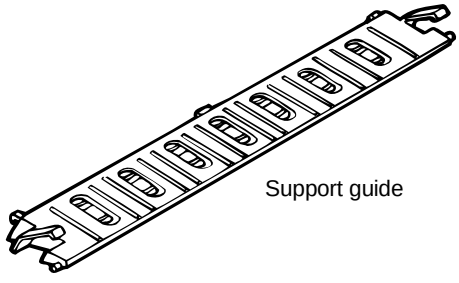
This completes the staple sorter installation.

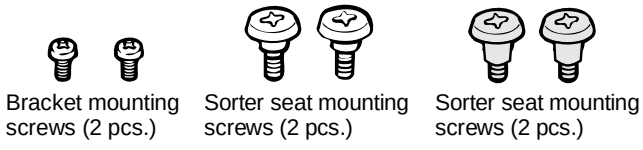
(4) SF-S16 (20-Bin sorter)







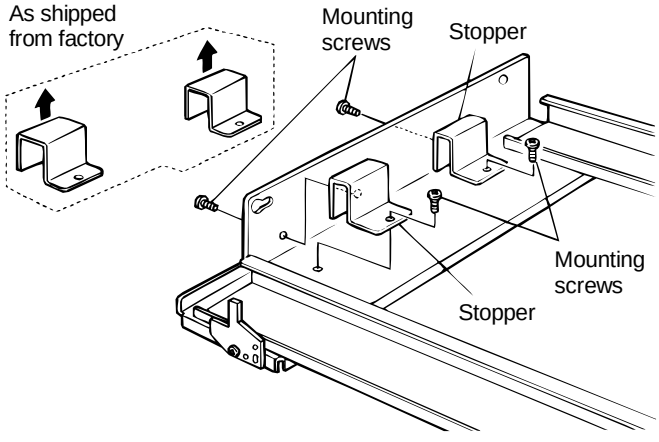


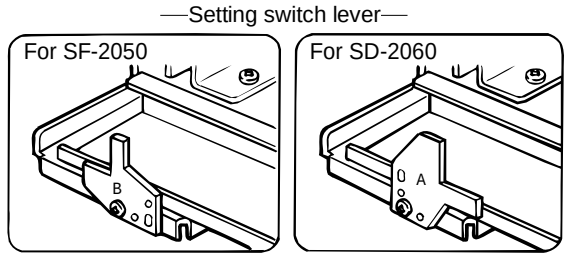


Unplug the copier and follow the procedure below.

1. Switch the sorter seat.

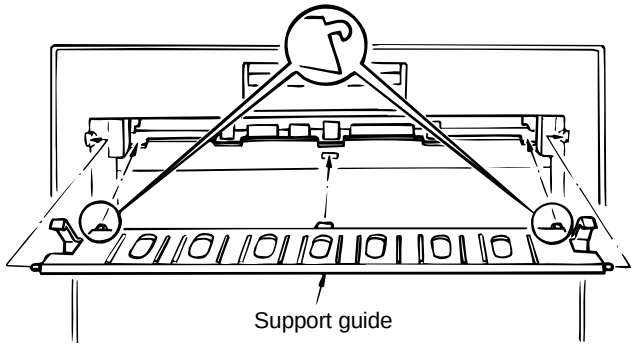
Remove the stoppers (2) attached to the sorter seat and refer to the illustration to install in their place the stoppers (2) which come packed with this sorter.





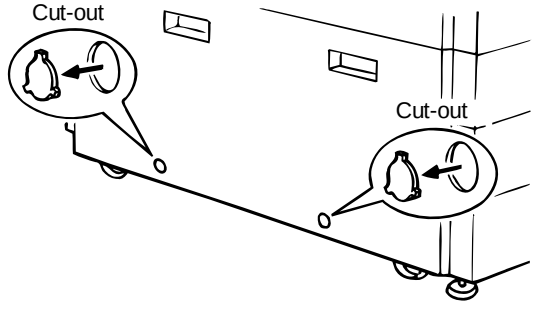
2. Install the support guide.

Hook the pawls (two locations) of the support guide to the inside of the copier paper exit end to install the guide as shown in Fig.

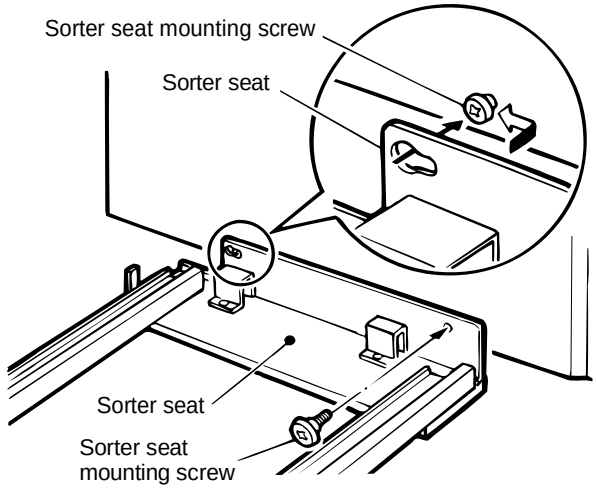


3. Mount the sorter seat to the desk.

Remove the two cut-outs in the cabinet panel on the left side of the desk.

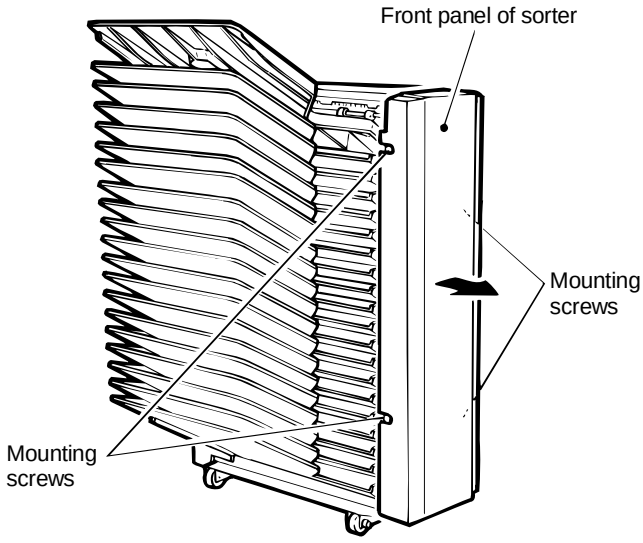


Secure one of the two sorter seat mounting screws to the back of the copier and hook the sorter seat onto it as shown in the illustration.
Next, use the other sorter seat mounting screw to secure the sorter seat.



4. Remove the front panel of the sorter.

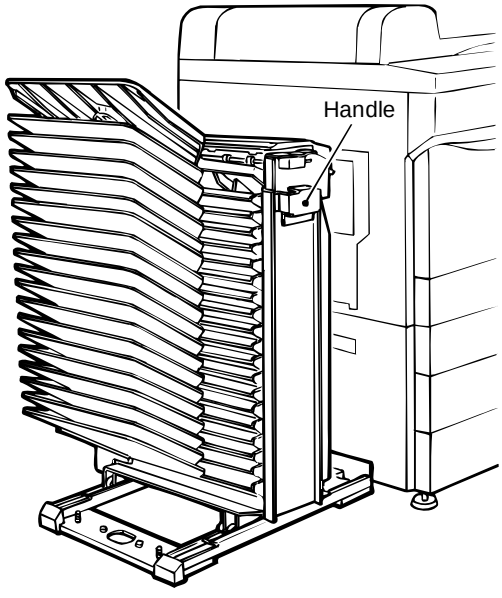
Loosen the four mounting screws in the front panel of the sorter and remove the panel.



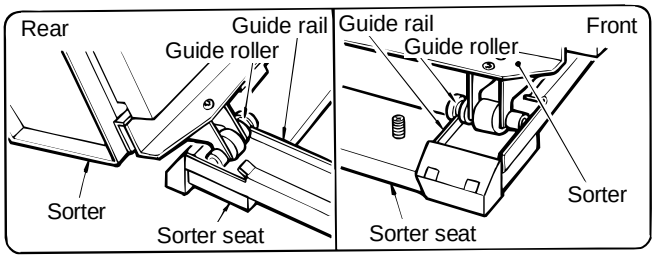
5. Place the sorter on the sorter seat.

While holding the handle, place the sorter gently on the sorter seat's guide rails.

When doing this, confirm that the rollers at the front and rear of the sorter are correctly seated on the sorter seat as shown.

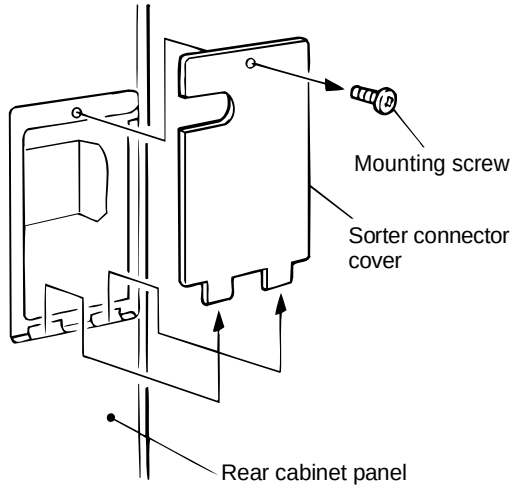


Enlarged view



6. Remove the sorter connector cover.

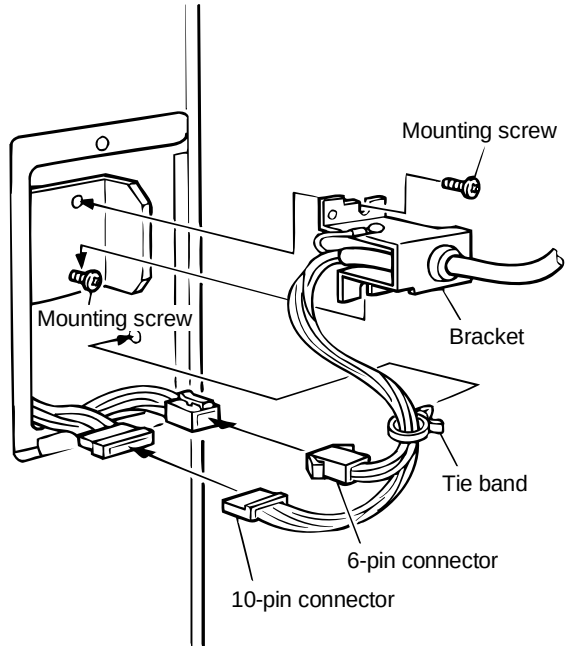
Remove the mounting screw which secures the sorter connector cover to the copier's rear cabinet panel, then remove the sorter connector cover.



7. Connect the sorter connectors.

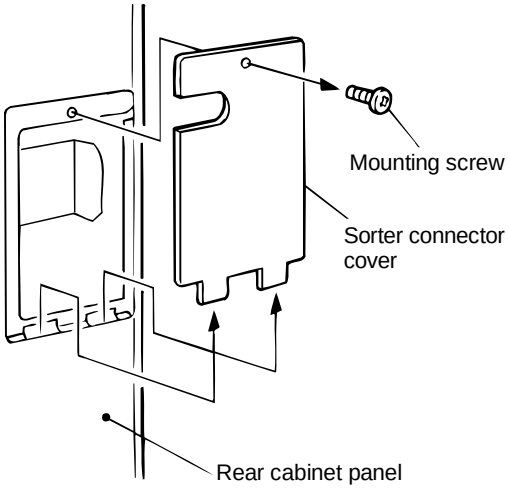
Loosely install in the position shown in the illustration one of the two bracket mounting screws which come packed with the sorter. Hook the bottom of the bracket onto the mounting screw, use the other bracket mounting screw to secure the top of the bracket, then tighten down the loosely installed screw.

Next, connect the 6-pin and 10-pin sorter connectors to the 6-pin and 10-pin connectors of the copier and insert the tie band into the hole under the installation part.



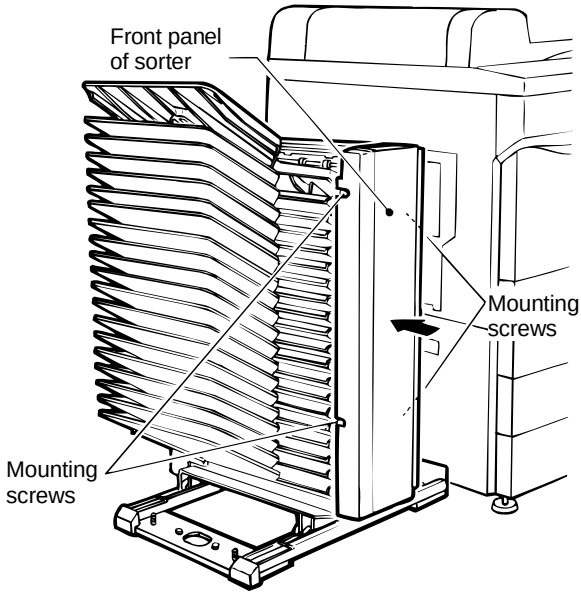
8. Mount the sorter connector cover.

Reinsert the sorter connector cover, which was removed in step 6, into the rear cabinet panel, then secure it with the mounting screw.



9. Reattach the front panel of the sorter.

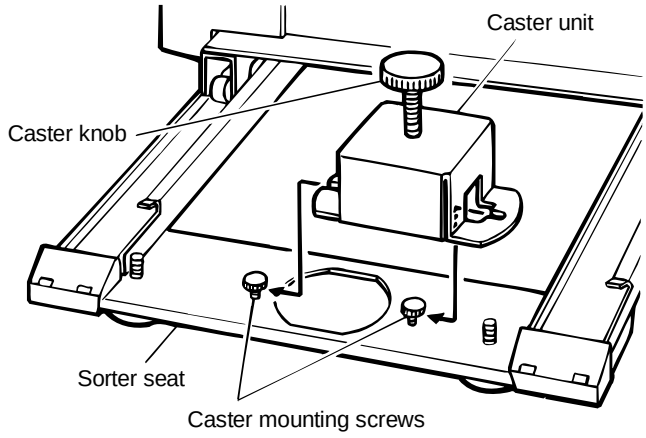
Use the four mounting screws to reattach the front panel of the sorter removed in step (6) in its original position.



10. Attach the caster unit.

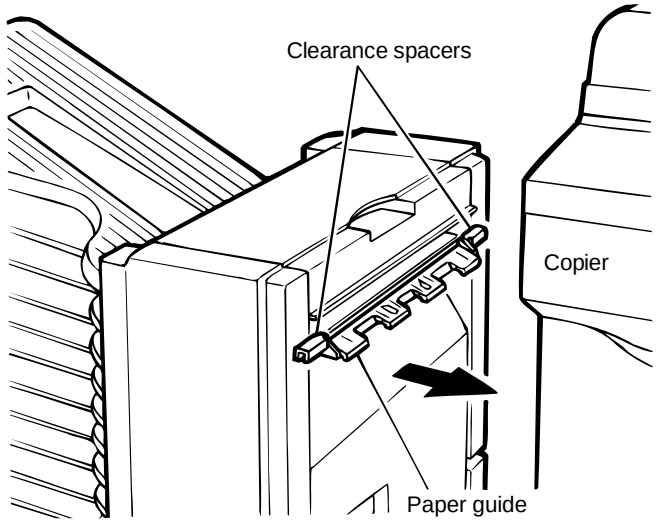
Loosen the two caster mounting screws on the sorter seat, then attach the caster unit as shown and tighten the two caster mounting screws.

Confirm that the caster of the caster unit is in the uppermost position. If not, turn the caster knob to raise the caster to the uppermost position.

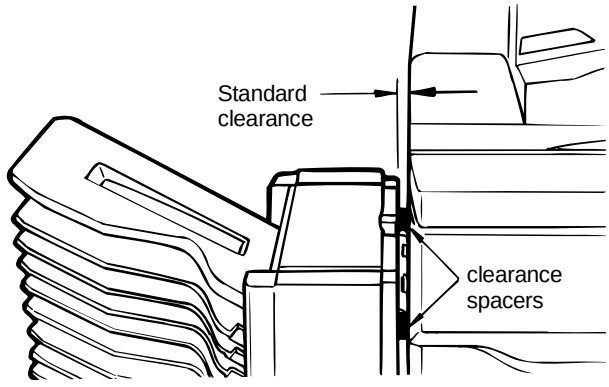


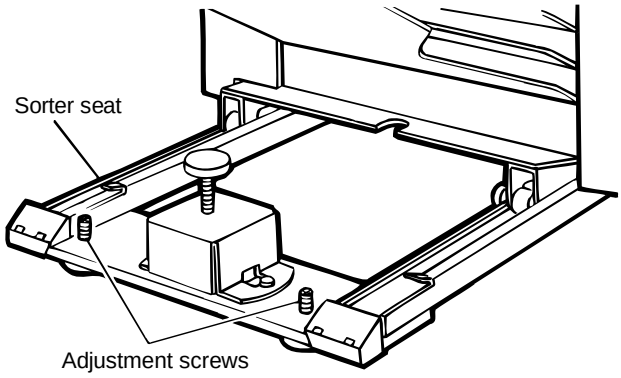
11. Adjust the clearance between the sorter and the copier.

Push the sorter gently against the copier's left cabinet panel.



The clearance spacers on the sorter paper guide will determine the standard clearance between the sorter and the copier. Turn the adjustment screws on the sorter seat to adjust the clearance so that the spacers are touching the copier.

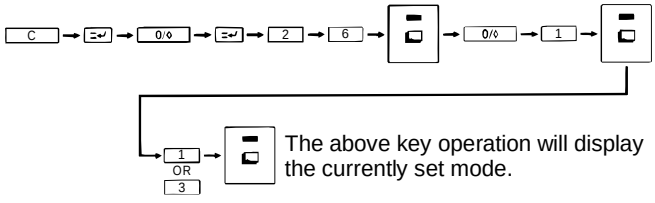




Plug the copier into a grounded outlet and turn the power switch on.
Then, follow the procedure below.

12. Set the mode.

Operate the keys on the copier to set the mode.



SIMULATION No. 26-1
SORTER/STAPLE SORTER SETTING?
1. YES 2. NO

[7] DISASSEMBLY AND ASSEMBLY

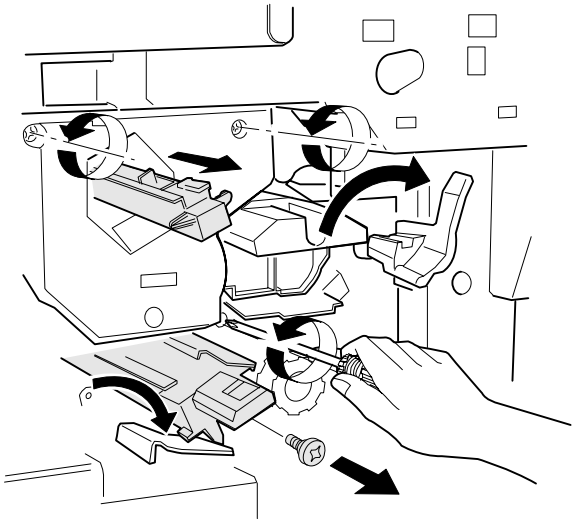
1. Process unit

Major parts: Photoconductor drum, toner receiver, BL PWB unit, discharge lamp unit, cleaning blade, drum marking sensor PWB, separation solenoid, separation pawl, process control sensor PWB, process volume PWB

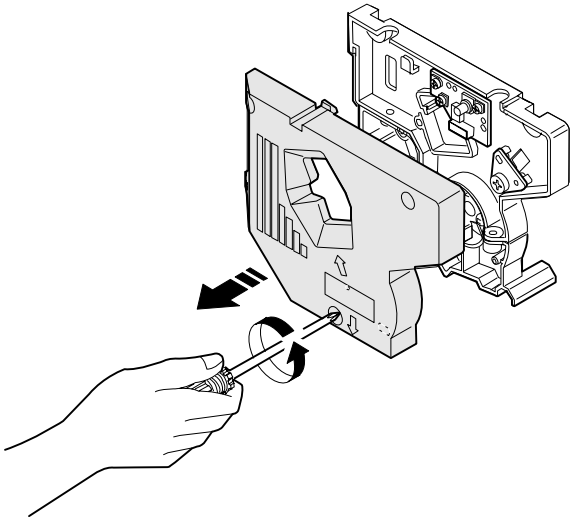
Disassembly procedures

① Open the front cover, remove the main charger unit, and remove the developing unit and the transfer/separation charger from the process unit.

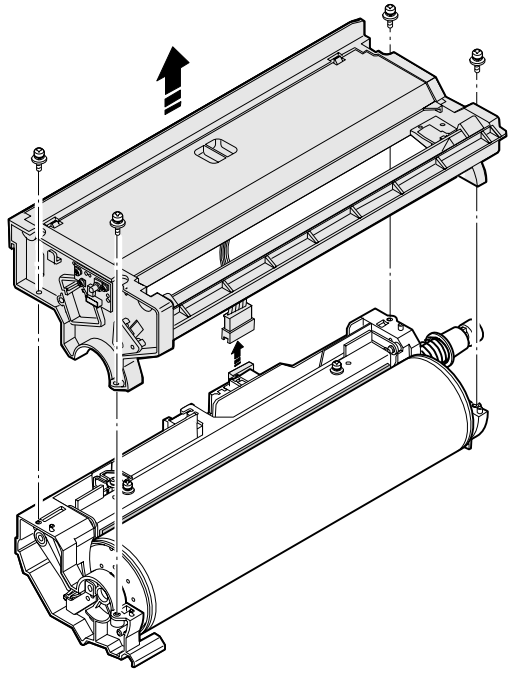
② Loosen three screws (blue), and remove the process unit from the copier body.



③ Loosen one screw (blue), and remove the process cover.



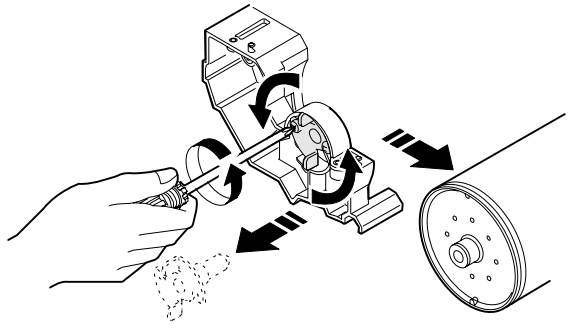
④ Loosen four screws (blue), and separate the upper and the lower sections of the process unit from each other.



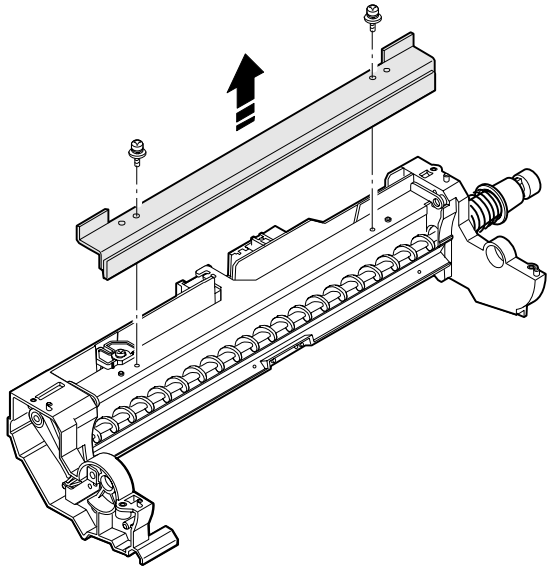
⑤ Release the cleaning blade pressure with the cleaning blade release arm.

⑥ Loosen two screws (blue), and turn the drum positioning plate counterclockwise to remove.

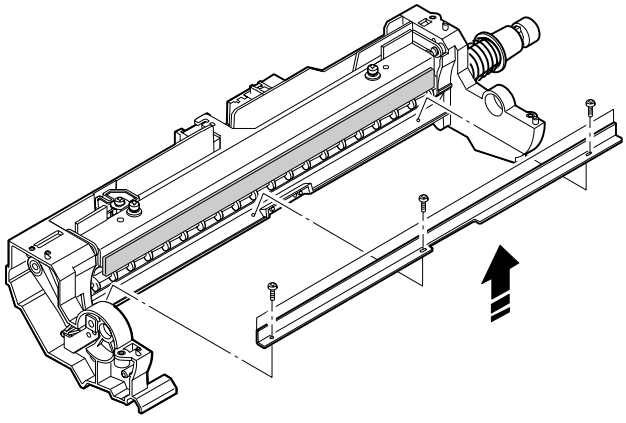
⑦ Remove the photoconductor drum upward.



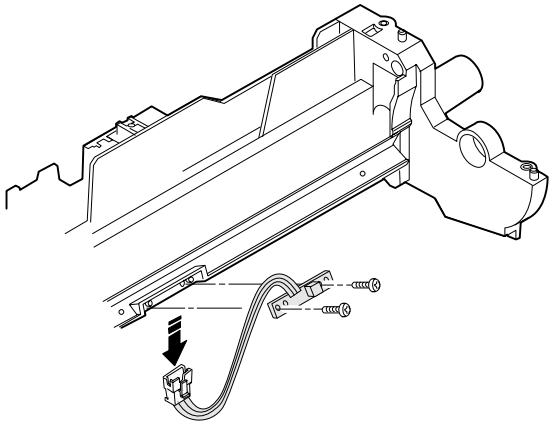
⑧ Loosen two screws (blue) and remove the cleaning blade.



⑨ Remove three screws and remove the toner receiver.



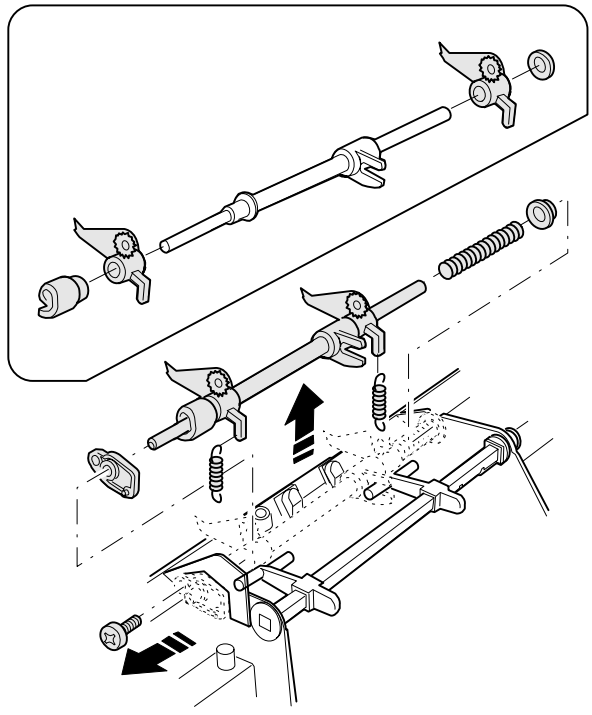
⑩ Remove two screws and the process sensor harness connector, and remove the process sensor PWB.



⑪ Remove two bearings of the DR drive shaft and the DR pawl returning SP-L, and remove the drum pawl drive plate.

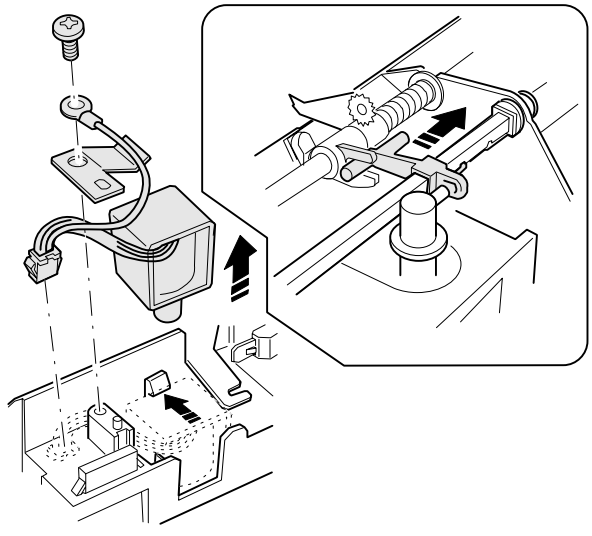
⑫ Remove two DR pawl springs from the hook, and remove the separation pawl together with the drum pawl shaft.

⑬ Remove the separation pawl from the drum pawl shaft.

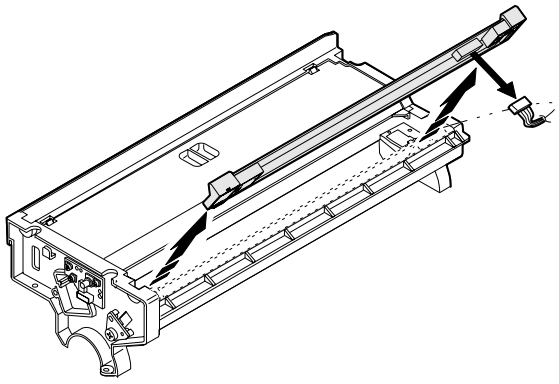


⑭ Remove one screw and remove the process arm spring.

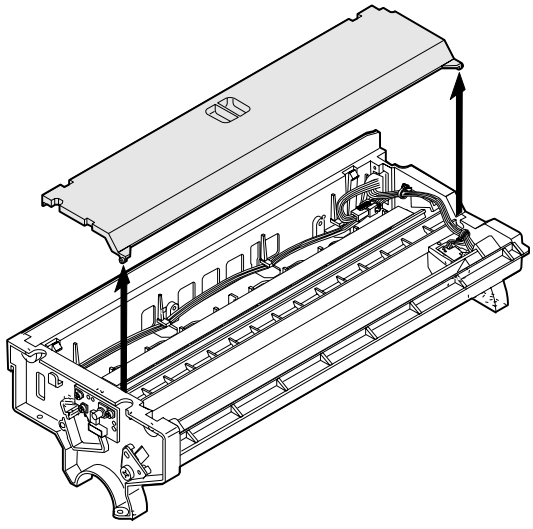
⑮ Remove the separation solenoid harness connector, and remove the separation solenoid.



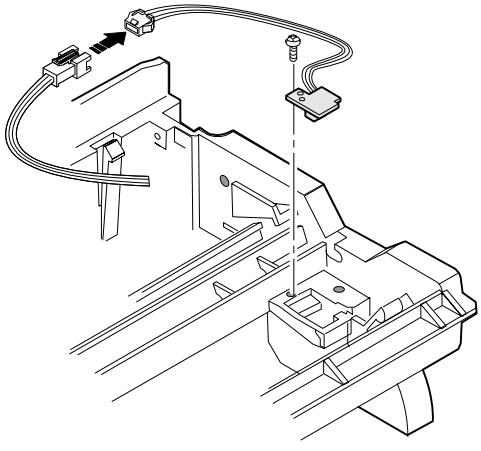
⑯ Remove the blank lamp harness connector, and remove the BL PWB unit.



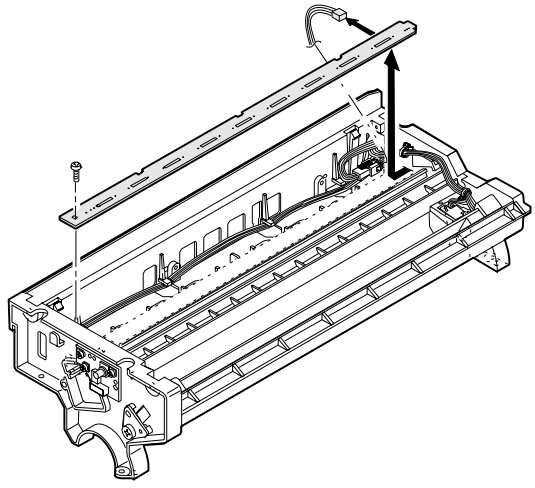
⑰ Remove the process tact cover.



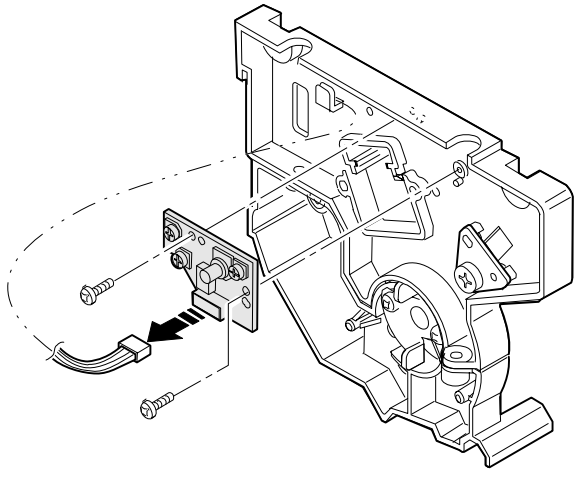
⑱ Remove one screw and the connector, and remove the drum marking sensor PWB.



⑲ Remove one screw and the connector, and slide and remove the discharge lamp unit.



⑳ Remove tow screws and the connector, and remove the process volume PWB.



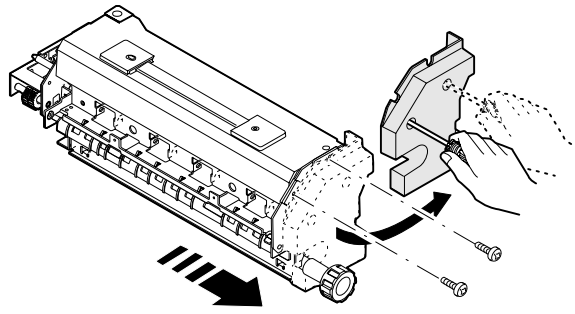
2. Fusing unit

Major parts: Heater lamp, upper/lower heat rollers, upper/lower separation pawls, upper/lower cleaning rollers, thermistor, thermostat

Disassembly procedures

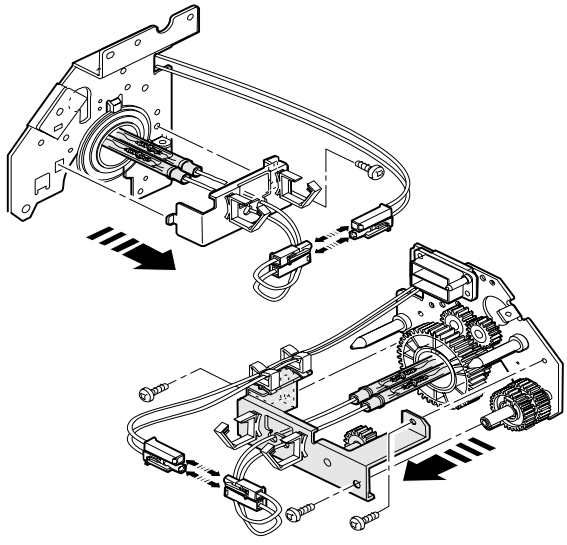
① Remove two screws, and remove the fusing unit from the body.

② Remove two screws (blue), and remove the fusing cover.

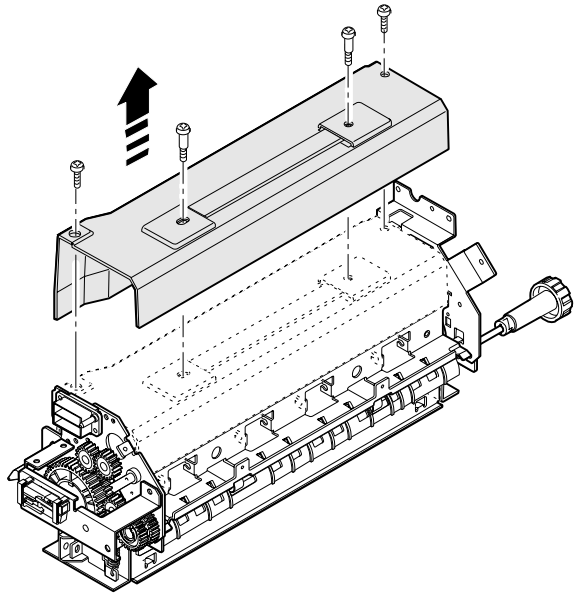


③ Remove the heater lamp harness connectors in the front and rear sides.

④ Remove the heater holder, and remove two heater lamps.

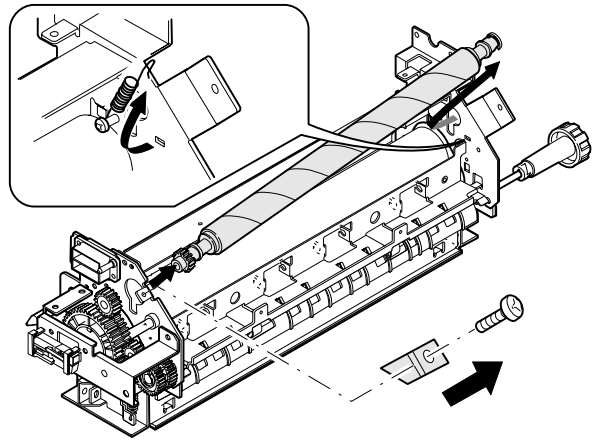


⑤ Remove four screws and remove the upper fusing cover.



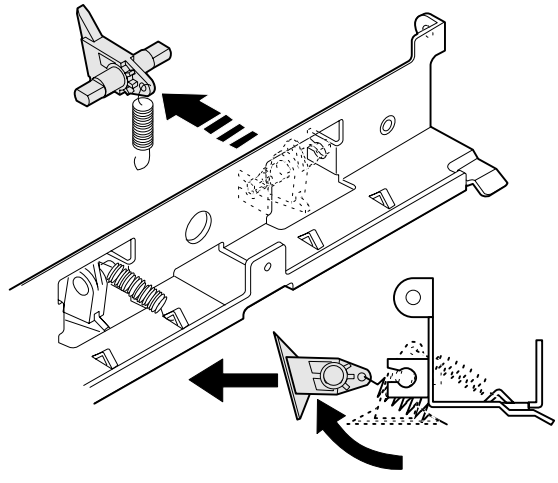
⑥ Remove one screw (blue), and remove the upper cleaning roller holding plate.

⑦ Remove the spring, and remove the upper cleaning roller.

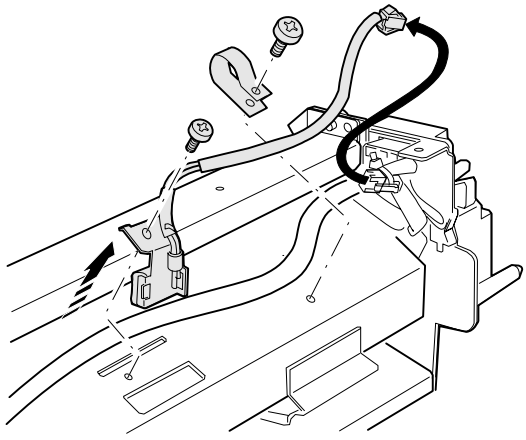


⑧ Remove one screw, and remove the upper separation pawl attachment plate.

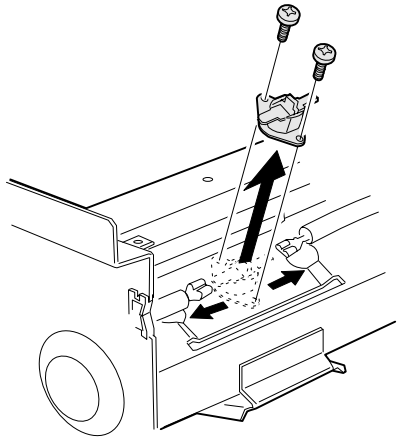
⑨ Remove the spring, and remove the upper separation pawl.



⑩ Remove the screw which fixing the thermistor, and remove the screws and connector of the holder which is fixing the harness, and remove the thermistor.

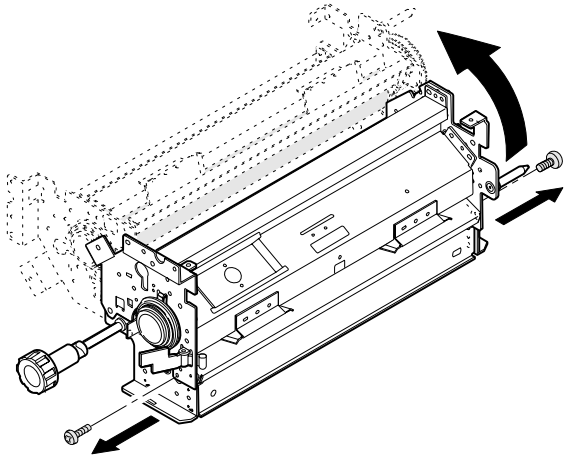


⑪ Remove the harness and two screws, and remove the thermostat.

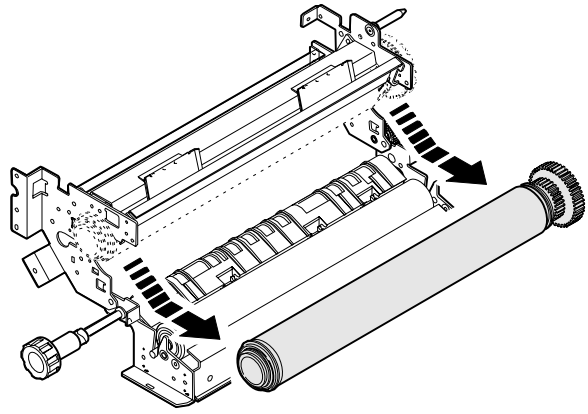


⑫ Tighten the two blue nuts to release the heat roller pressure.

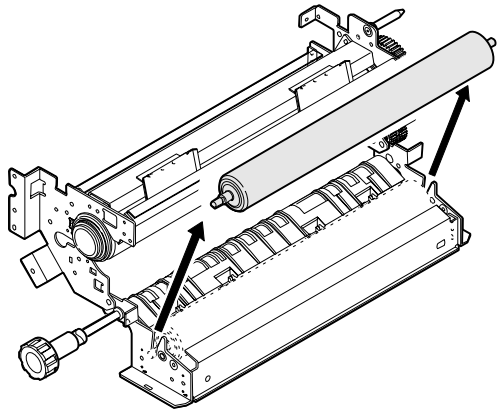
⑬ Remove two screws (blue), and separate the upper heat roller section and the lower heat roller section from each other.



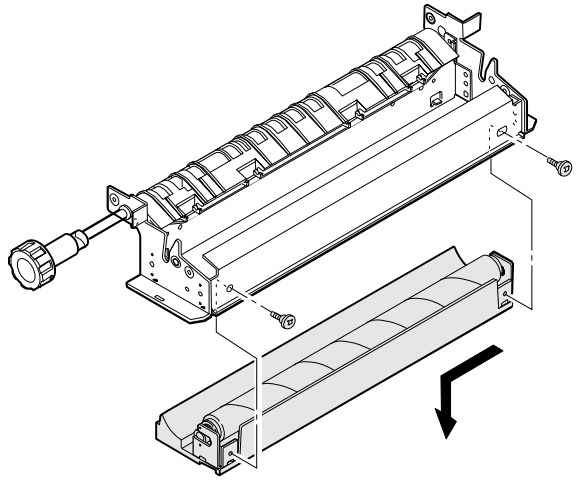
⑭ Remove the upper heat roller unit.



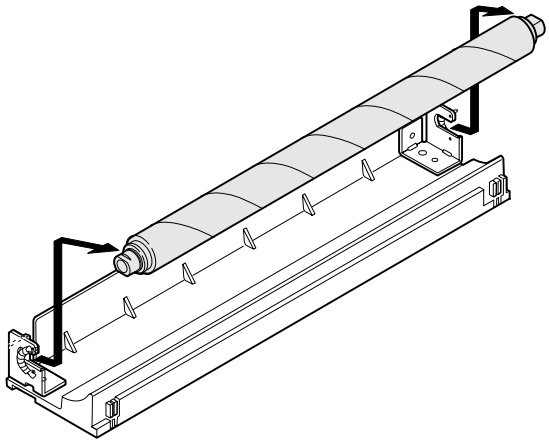
⑮ Remove the lower heat roller unit.



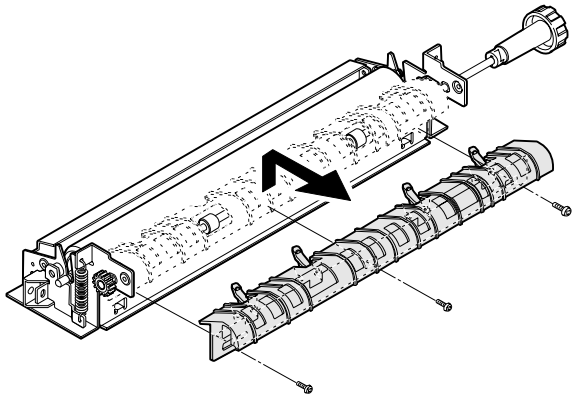
⑯ Remove two screws, and slide and remove the lower fusing cover.



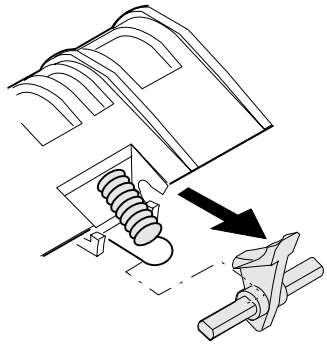
⑰ Remove the lower cleaning roller.

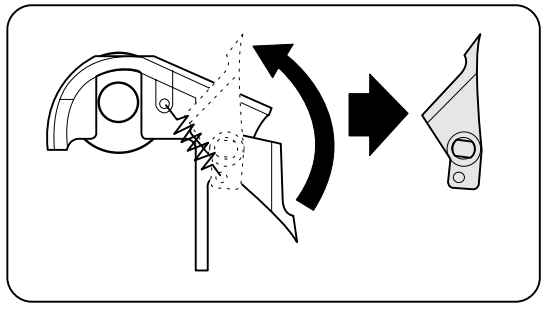


⑱ Remove three screws (blue), and remove the lower separation pawl attachment plate.



⑲ Remove the spring, and remove the lower separation pawl.





3. Manual paper feed unit

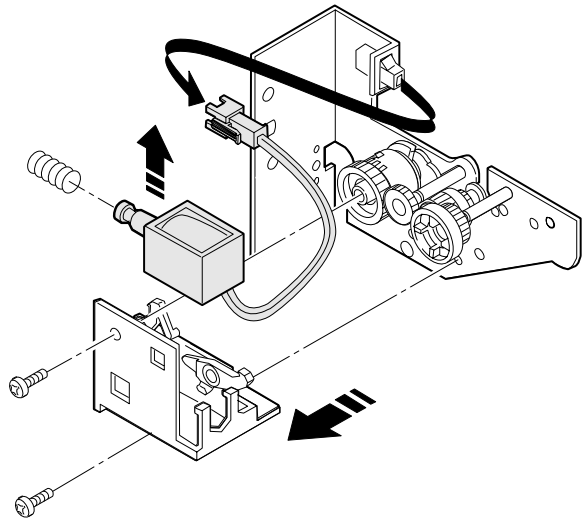
Major parts: Manual paper feed roller, manual separation (reverse) roller, manual take-up roller, take-up roller spring clutch, paper feed roller spring clutch, manual paper feed solenoid

Disassembly procedures

① Remove four screws, and remove the manual paper feed tray unit from the copier.

② Remove two screws, and remove the solenoid harness connector.

③ Remove the manual paper feed solenoid from the manual paper feed solenoid frame and the manual paper feed clutch section.



④ Remove the E-ring, and remove the take-up roller spring clutch.

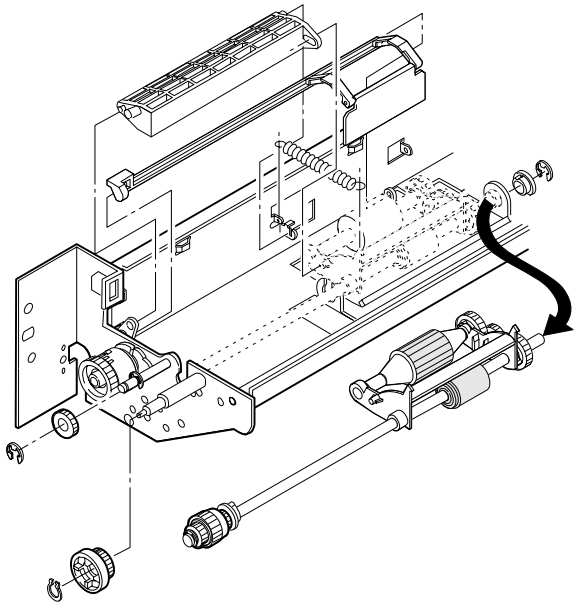
※ When the spring inside the spring clutch is removed, be careful of the attachment position of the spring to the sleeve for assembly.

⑤ Remove the manual feed arm B.

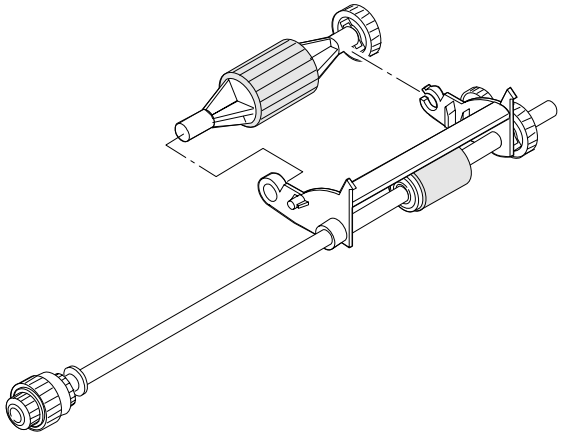
⑥ Remove the take-up roller from the manual feed arm.

⑦ Remove two linkage gears (C-ring and E-ring), and remove the E-ring of the paper feed roller spring clutch.

⑧ Remove the take-up roller and the paper feed roller together with the manual arm C.



⑨ Remove the take-up roller.

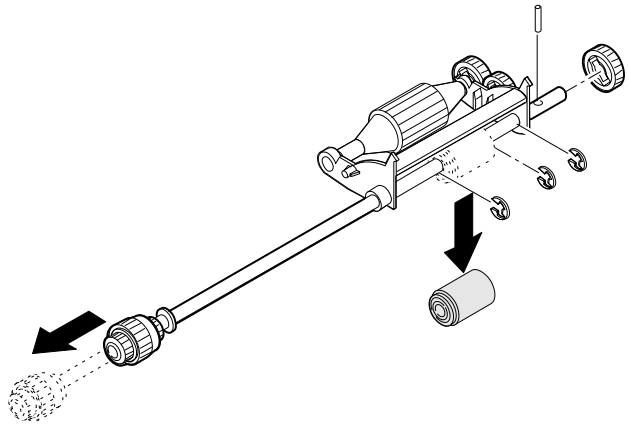


⑩ Remove the clutch boss, the spring clutch, and the clutch sleeve of the paper feed roller spring clutch.

⑪ Remove the spring and three E-rings, and remove the bearing.

⑫ Remove the pin, the clutch boss of the paper feed spring clutch, and the bearing.

⑬ Remove three E-rings, and remove the shaft and the paper feed roller.



⑭ Remove one screw and separate pressure release levers A and B from each other.

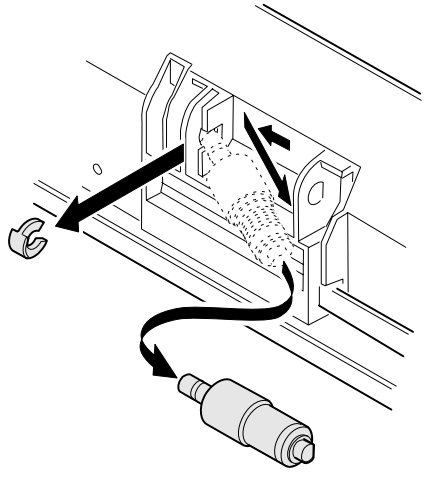
⑮ Remove one screw, and remove the frame which is connecting the pressure release lever B and the separation (reverse) roller pressing plate.

⑯ Remove the E-ring and the shaft, and remove the pressing plate with the manual separation (reverse) roller.

※ Be careful of the position of the spring which is attached to the pressing plate.

⑰ Remove the stopper.

⑱ Remove the E-ring, and remove the separation (reverse) roller unit.



4. Four-stage tray, large capacity tray (LCC) paper feed unit

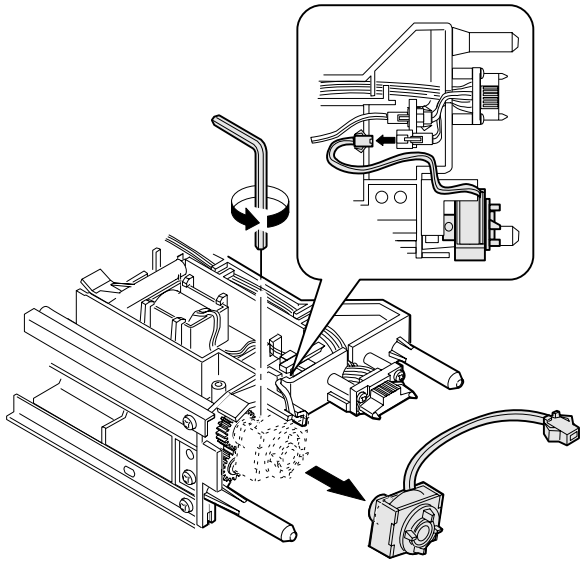
Major parts: Paper feed roller, separation (reverse) roller, take-up roller, paper feed roller spring clutch, pick-up solenoid, separation (reverse) roller spring clutch

Disassembly procedures

(The following descriptions are made on the four-stage tray, however, are similar to the large capacity tray in the parts and the mechanism.)

① Remove the set screw, and remove the paper feed unit from the copier.

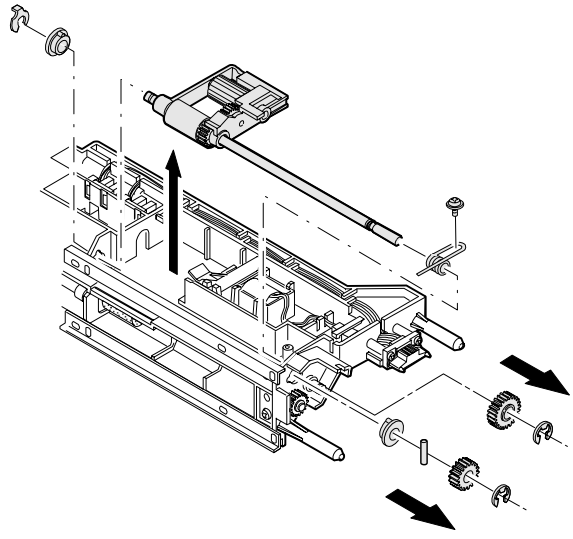
② Remove the set screw, and remove the connector of the paper feed roller spring clutch harness, and remove the paper feed roller spring clutch.



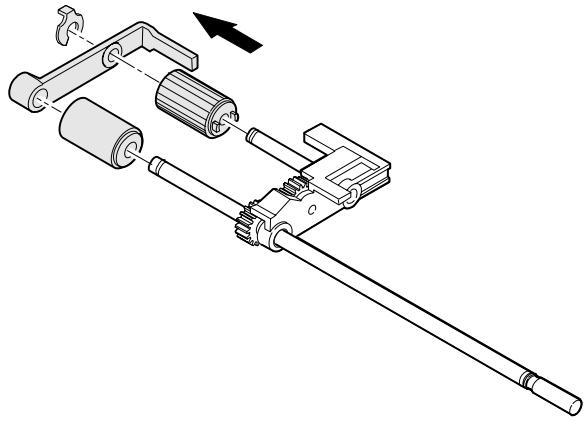
③ Remove the E-ring, and remove the paper feed roller gear and the linkage gear.

④ Remove the brake spring, the stopper, and the bearings (R and L).

⑤ Remove the take-up roller and the paper feed roller assembled in a unit.

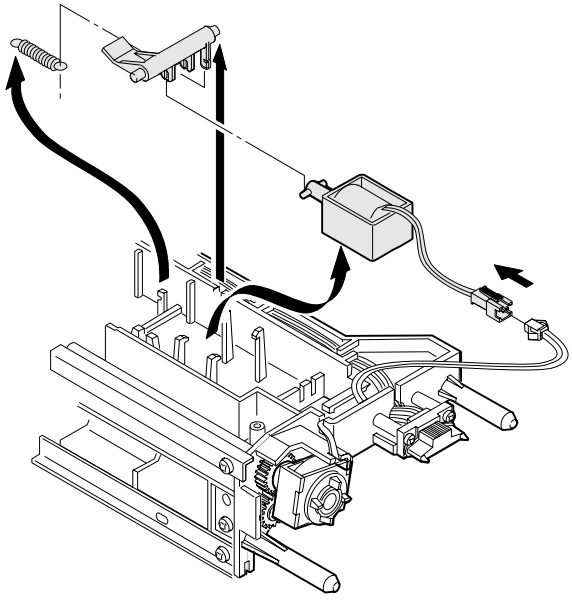


⑥ Remove pick-up lever L, and remove the take-up roller and the paper feed roller.



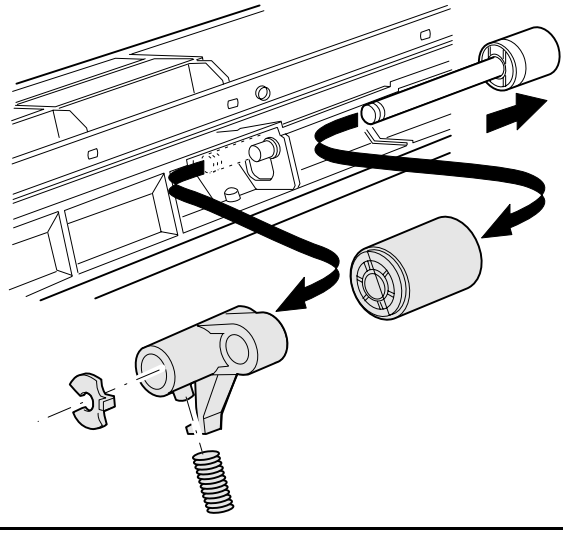
⑦ Remove the spring, and remove the solenoid lever.

⑧ Remove the pick-up solenoid harness connector, and remove the pick-up solenoid.



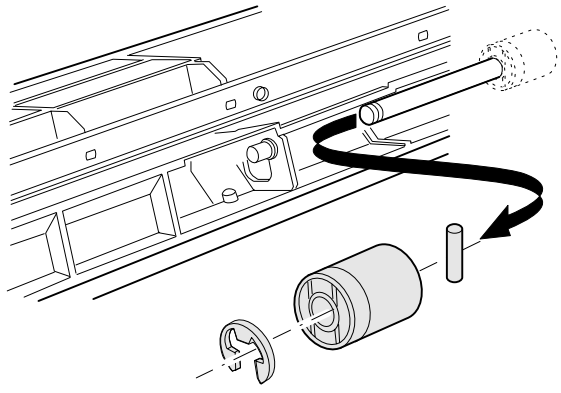
⑨ Remove the E-ring, and remove the separation (reverse) roller gear and the bearing.

⑩ Remove the stopper, and remove the separation (reverse) roller lever and the spring.



⑪ Remove the separation (reverse) roller.

⑫ Remove the E-ring, and remove the separation(reverse) roller spring clutch.

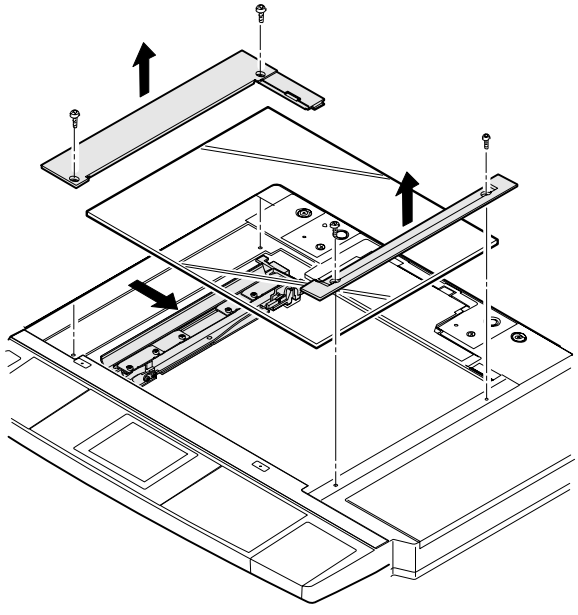


5. Optical unit

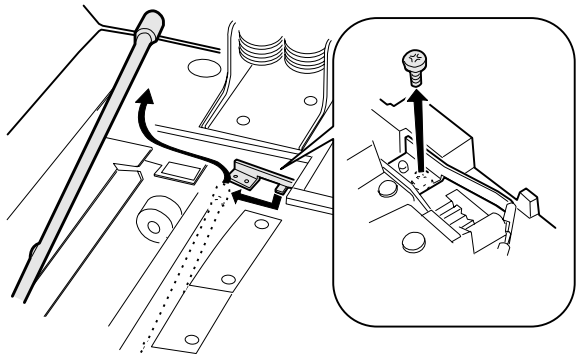
Major parts: Copy lamp, copy lamp unit, No. 2/3 mirror base unit, No. 4/5 mirror base unit, AE sensor PWB

Disassembly procedures

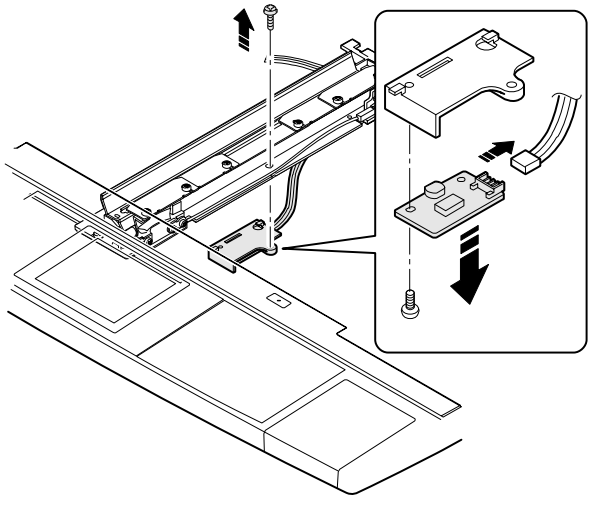
① Remove the original guides R and L, and remove the table glass. (Screws x 2 pcs. each)



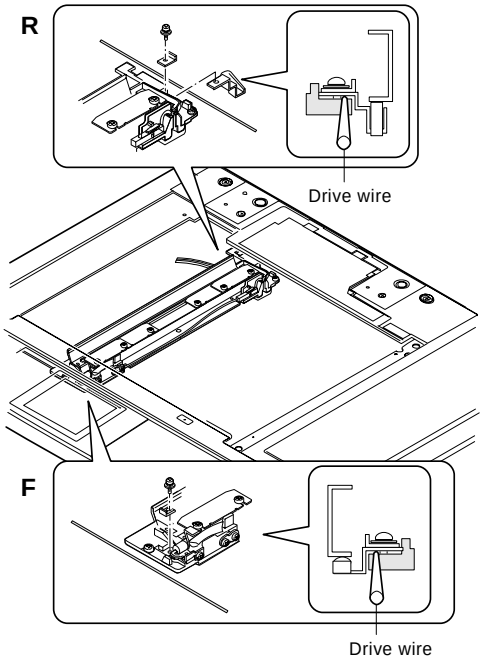
② Move the copy lamp unit to the notch section in the rear of the upper cabinet, remove the screw, and remove the copy lamp.



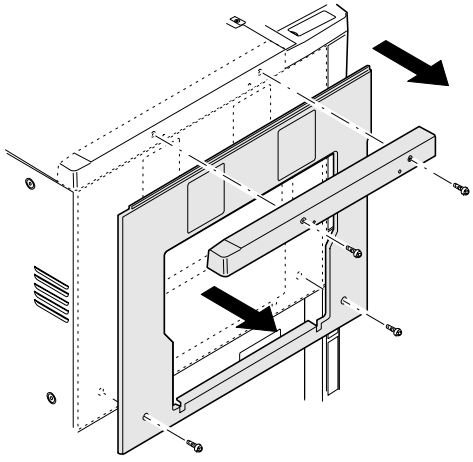
③ Remove one screw, disconnect the harness connector, and slide and remove the AE sensor PWB.



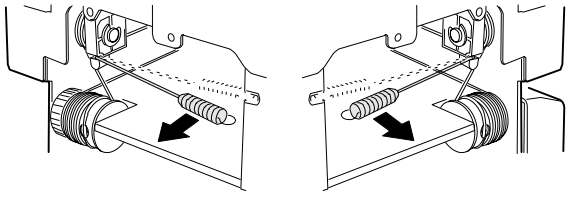
※ Positions of No.1 mirror base (copy lamp unit) and drive wire



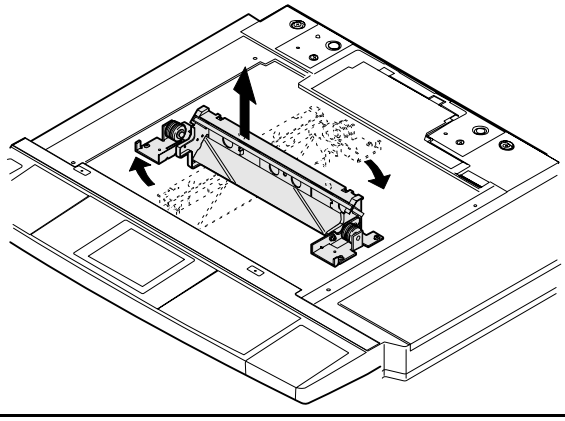
④ Remove the upper cabinet left, and remove the left cabinet upper.



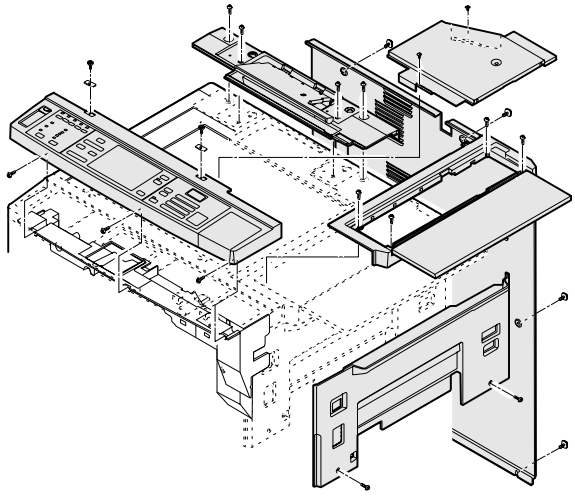
⑤ Remove the mirror base wire from the No. 2/3 mirror base unit.



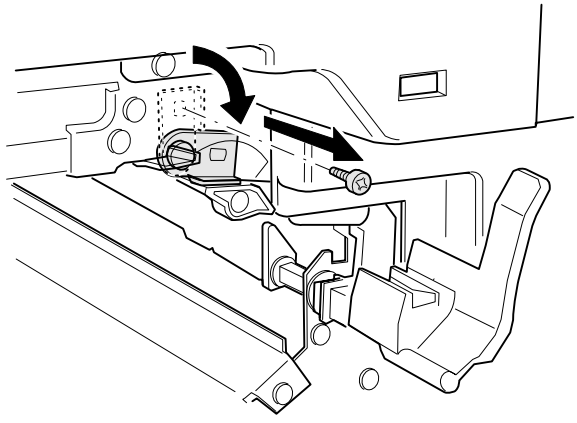
⑥ Remove the No. 2/3 mirror base unit.

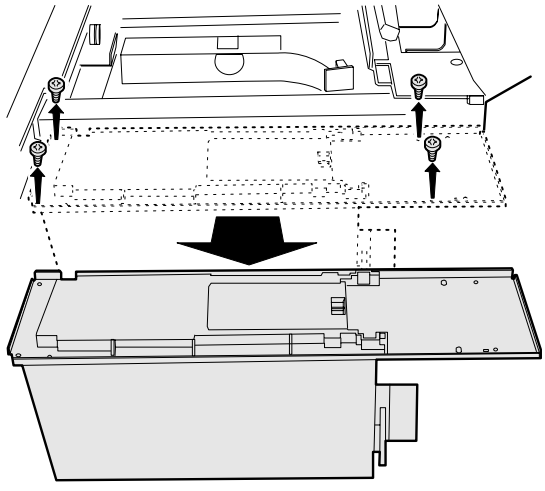


⑦ Remove the parts as shown below.

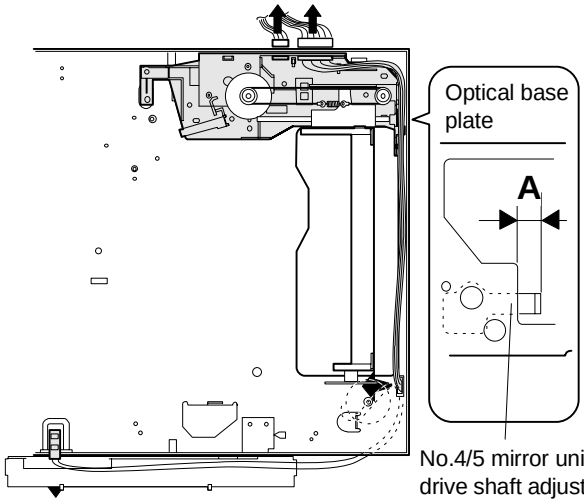


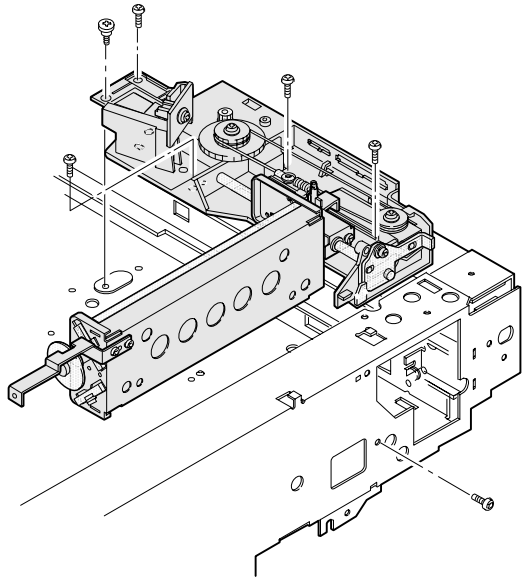
⑧ Remove the toner hopper unit.





⑨ Remove the harnesses, and remove the No. 4/5 mirror unit.





※ When disassembling, measure the size of "A" with a scale to control tilting of the No. 4/5 mirror unit (which causes improper focusing or skew copying).
When assembling, fit to the size.

Mirror base wire stretching

(Preliminary check items)

- Check and confirm the stop position of the wire winding pulley.
- Check that the wire grooves of the wire winding pulley in the frons and the rear sides are in the same position.

(Visual check)
If the position is shifted considerably, loosen two set screws of the pulley, and fit the wire winding pulley (front/rear) together.
Tighten two set screws of the pulley.

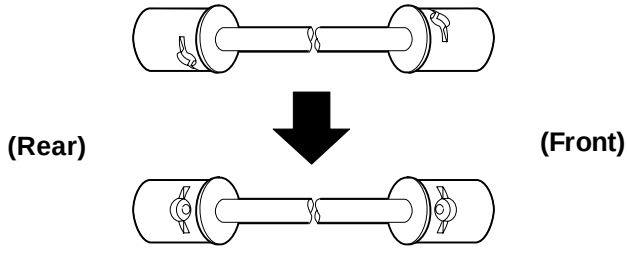
① Hook the mirror base wire fixture on the hook of the tension adjustment plate.

② Pass the mirror base wire along the groove outside the mirror base B pulley.
At that time, allow a clearance of 2mm in the optical section notch and the mirror base B.

③ Pass the mirror base wire along the groove of the paper feed side pulley.

④ Pass the mirror base wire under the mirror base B and wind it around the winding pulley.

At that time, fix the winding pulley wire groove on the upper side, wind the mirror base wire 9 turns, and put the 8th turn in the groove.



The first turn of the mirror base wire must be 9 ~ 10mm toward the copier frame from the pulley groove.

⑤ Pass the mirror base wire along the paper exit side pulley groove.

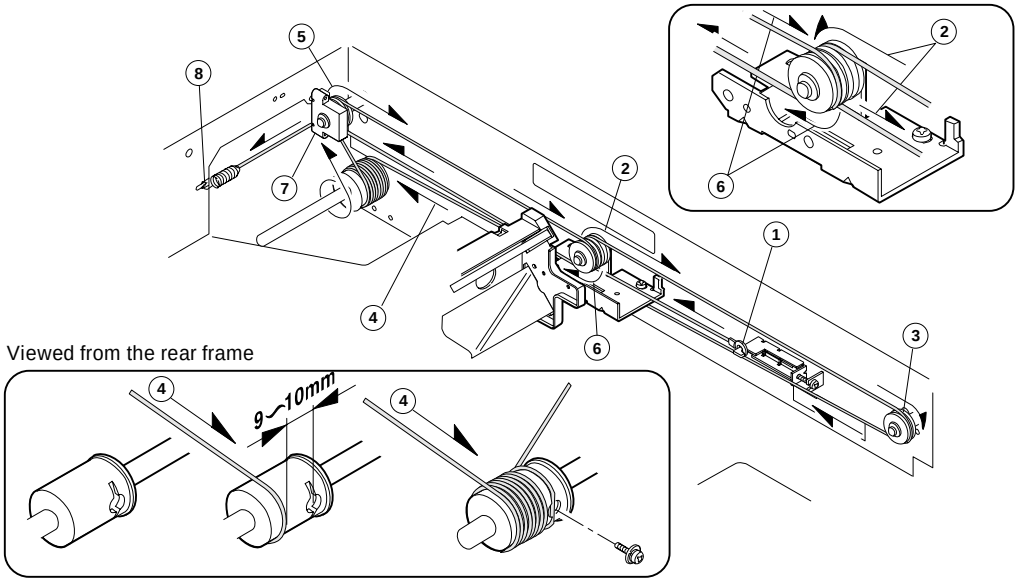
⑥ Pass the mirror base wire along the groove inside the mirror base B pulley.

⑦ Pass the mirror base wire through the wire guide.

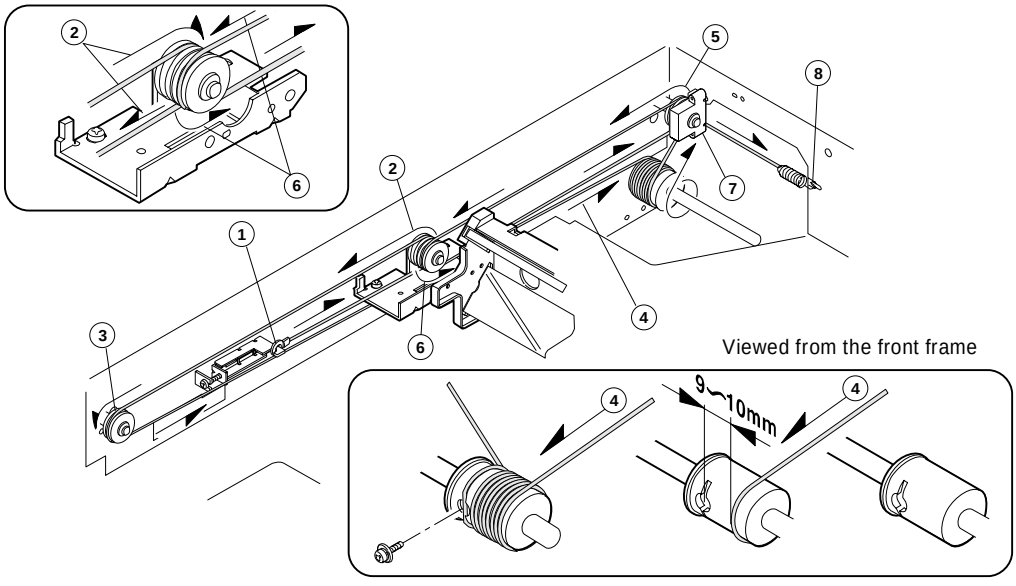
⑧ Hook the mirror base wire tension spring in the long hole in the optical base plate.

※ Perform the same procedures in the front frame side and in the rear frame side.

(Rear frame side)



(Front frame side)



Mirror base wire stretching

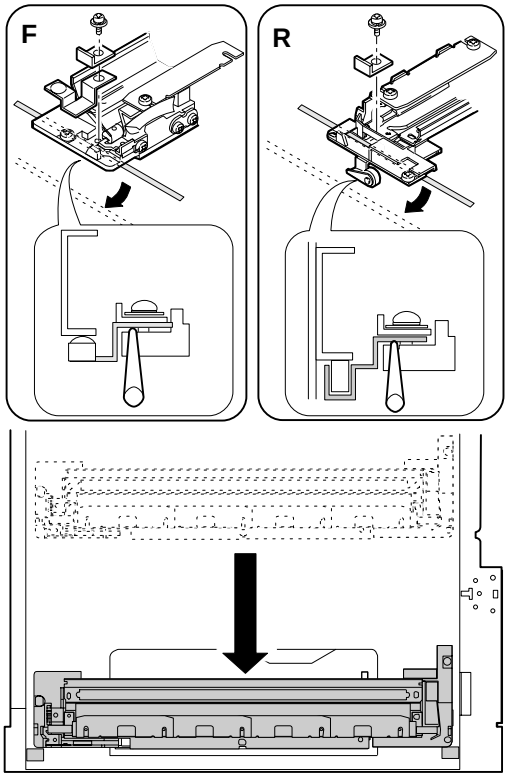
Refer to "[8] ADJUSTMENTS."

Copy lamp unit attachment position

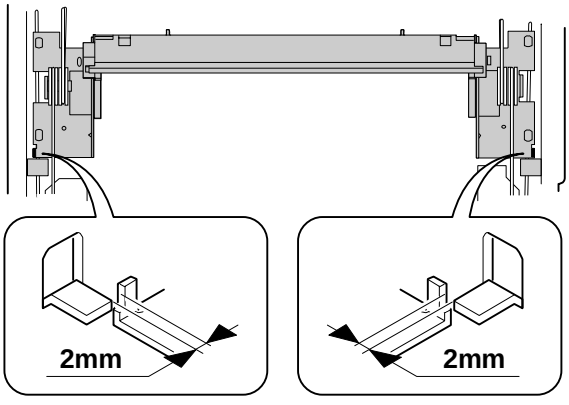
① pass the front/rear mirror base drive wires between the copy lamp unit frame and the wire fixing plate.

At that time, do not tighten the wire fixing screw.

② Press the copy lamp unit to the positioning plate, and tighten the wire fixing screw.



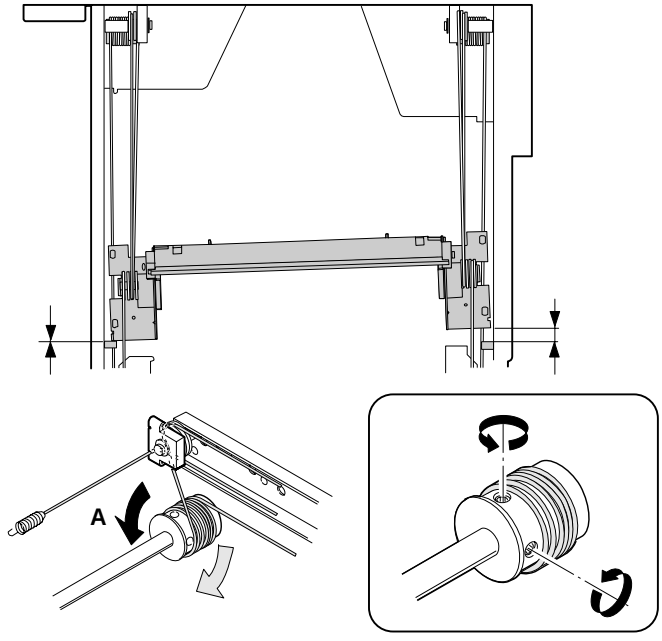
※ At this time, allow a clearance of 2 mm between the No. 2/3 mirror base unit and the projection in the optical section.



No. 2/3 mirror base unit attachment position

This is to adjust the parallelism of the mirror base B with the drum surface and the original surface.

① Manually turn the mirror base drive pulley to bring the mirror base B into contact with the mirror base positioning plate. If the rear side and the front side of the mirror base B make contact with the mirror base positioning plate simultaneously, the parallelism of mirror base B is proper, and there is no need for further adjustment.

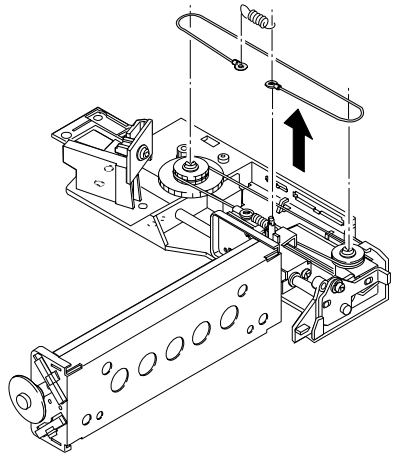


Mirror drive wire (mirror base C) replacement

(Mirror base C drive wire removal)

① Remove the mirror base C drive wire spring and the fixture from the mirror base.

② Remove the mirror base C drive wire from the mirror base pulley.



Reverse the above procedures.

(Note) Hook the wire fixture first on the mirror base pin.

Lens drive wire replacement

A. Lens drive wire removal

① Remove original guide R, and remove the table glass.

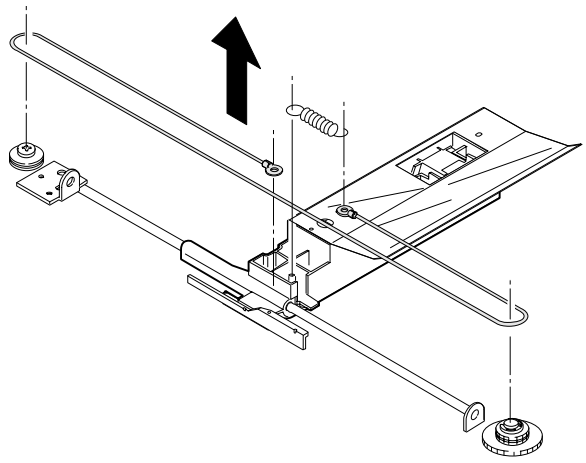
② Remove the dark box cover.

③ Remove the drive wire spring and the wire hook from the lens carriage boss.

B. Lens drive wire stretching

Reverse the above procedures.

(Note) First hook the spring on the lens carriage boss for easier operation.



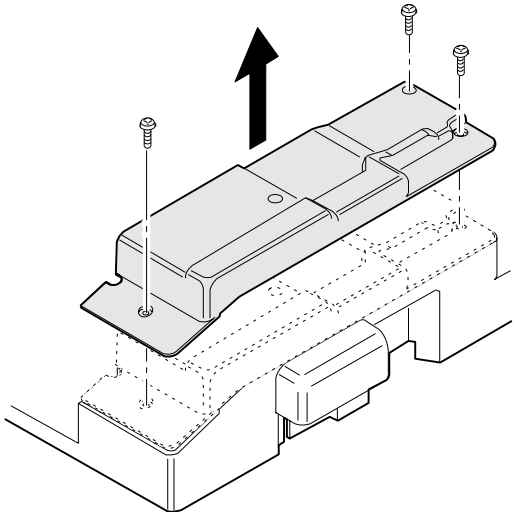
6. ADU unit

Major parts: Rear edge plate drive motor, alignment plate drive motor, paper holding plate solenoid take-up roller, paper feed roller, reverse roller, paper feed roller clutch, transport roller clutch

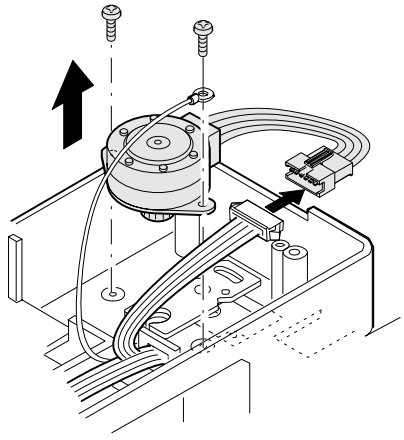
Disassembly procedures

① Remove the ADU unit from the copier.

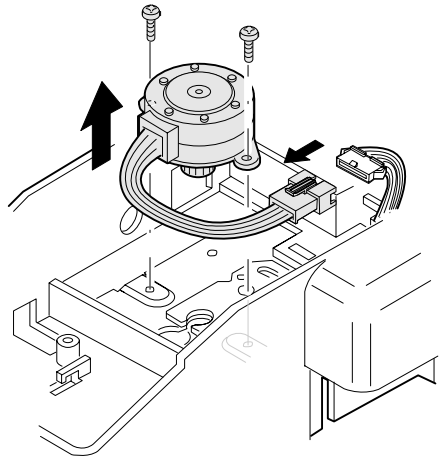
② Remove three screws and remove the upper cover.



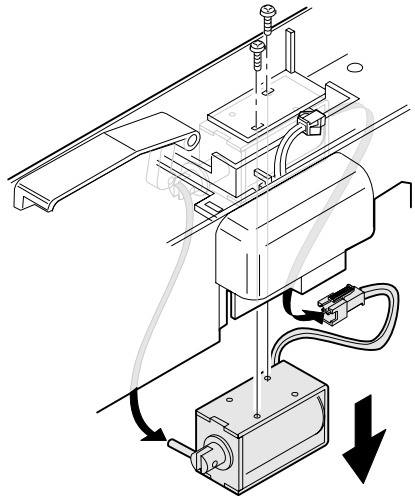
③ Remove two screws and the harness connector, and remove the rear edge plate drive motor.



④ Remove two screw and the harness connector, and remove the alignment plate drive motor.

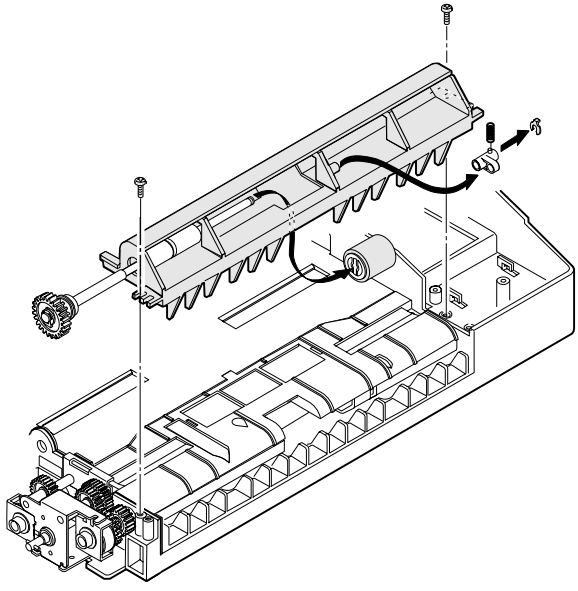


⑤ Remove two screws and remove the paper holding plate solenoid.

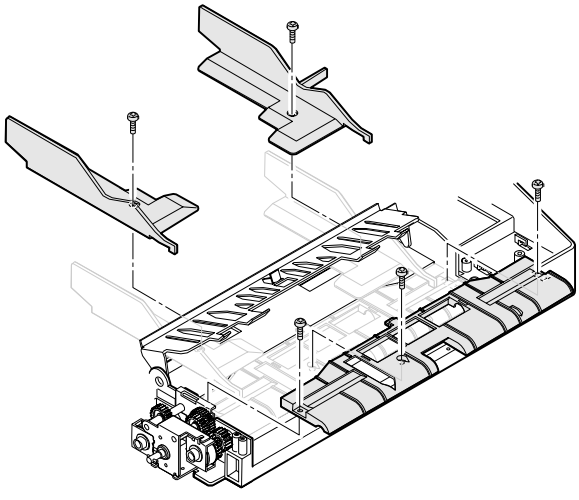


⑥ Remove two screws, and remove the paper feed guide unit.

⑦ Remove the stopper, and remove the reverse roller.

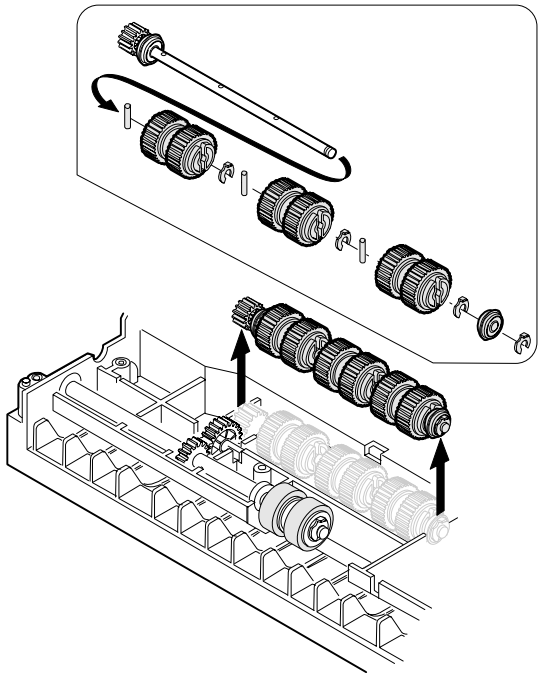


⑧ Remove the alignment plate and the paper feed cover.

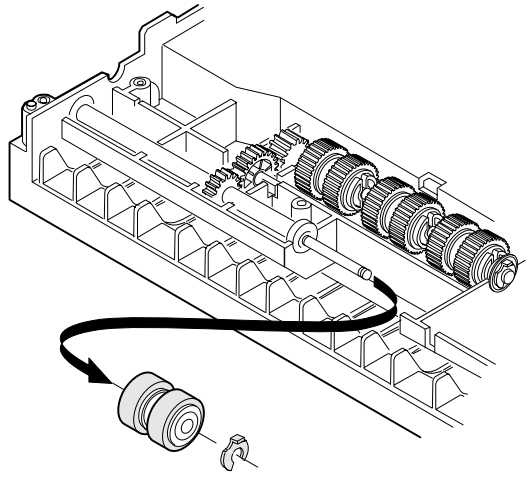


⑨ Remove the take-up roller unit.

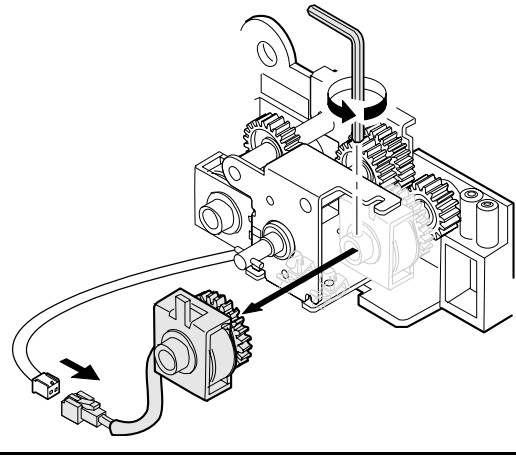
⑩ Remove three E-rings, the gear, and the stopper, and remove the take-up roller.



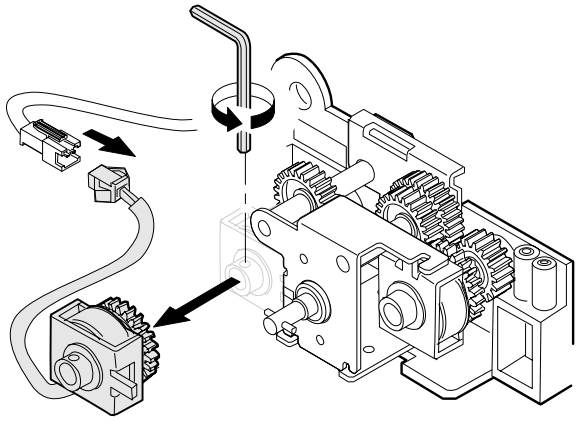
⑪ Remove the stopper, and remove the paper feed roller.



⑫ Remove the set screw, and remove the paper feed roller clutch.



⑬ Remove the set screw, and remove the transport roller clutch.



[8] ADJUSTMENTS

1. Developing section

(1) Developing doctor clearance adjustment

① Disassembly the section until as shown in the figure.

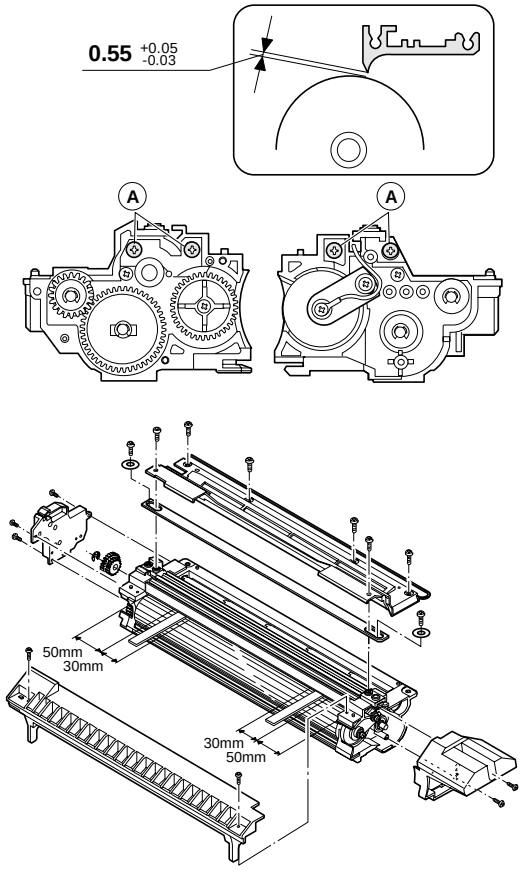
② Loosen fixing screws A of the DV doctor. (2 pcs. in the rear frame, 2 pcs.in the front frame)

③ Insert a 0.50mm clearance gauge between 50mm ~ 80mm from the DV doctor edge.

④ Press the DV doctor in the arrow direction, and tighten the fixing screw of the DV doctor. (Tighten in the front and the rear sides.)

⑤ Check that there is a clearance of 0.55 $^{+0.05}_{-0.02}$mm at 50mm from the DV doctor edge and at 80mm from the other edge.

※ Note: When inserting the clearance gauge, be careful not to scratch the DV doctor and the MG roller.



(2) Developing magnet roller main pole position adjustment

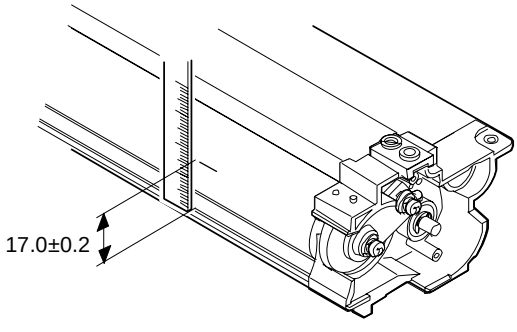
① Disassemble the section until as shown in the figure.

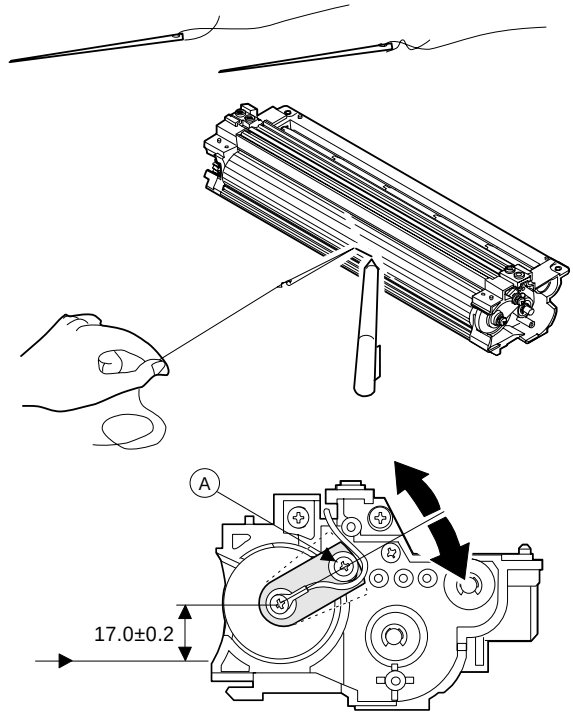
② Tie a thread to a needle or a pin.

③ Hold the thread, and bring the needle near the MG roller. (Since the MG roller diameter is so small that a clip cannot be used for precise positioning.)

④ Mark the contact point of the needle on the MG roller surface with a marking pen.

⑤ Measure the distance between the marked position and the surface on which the developing unit is placed. Check that the distance is 17.0 ± 0.2mm.
If the distance is not the specified value, loosen the fixing screw of the main pole adjustment plate, and move the adjustment plate in the arrow direction to adjust.





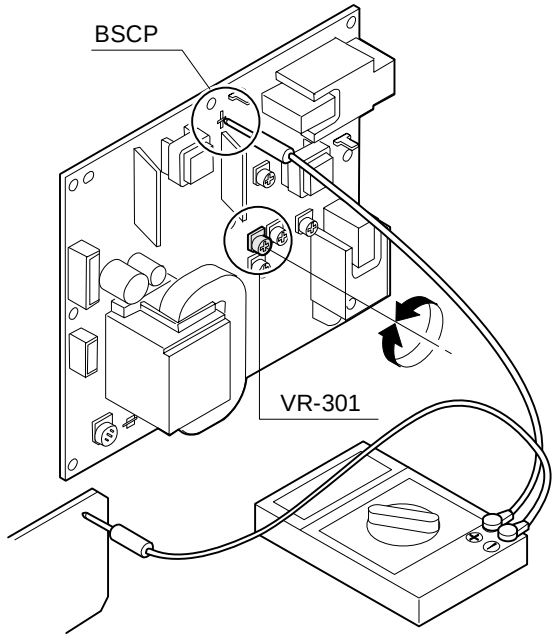
(3) DV bias voltage adjustment

① Set the digital multi meter range to DCV 300V or greater.

② Put test rods to the DV bias output check pin (BSCP) of the high voltage unit and the chassis (GND).

③ Execute simulation 8-1. (A DV bias voltage is outputted for 30 sec.)

④ Adjust the DV bias voltage adjustment volume (VR-301) so that the output voltage is –200V ±5V.



(4) Note for installation of rollers to the developing unit

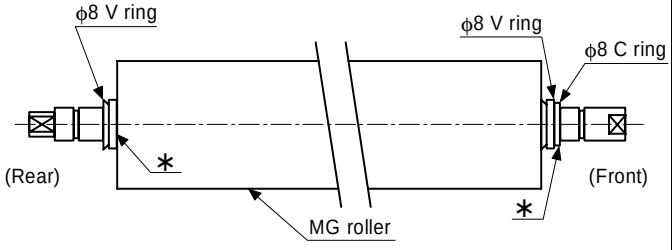
① Be careful to the installing direction of the V ring.

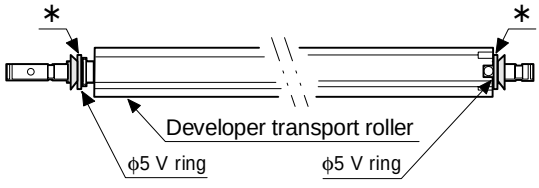
② Allow no clearance between the V ring and the rollers (sections marked with "∗").

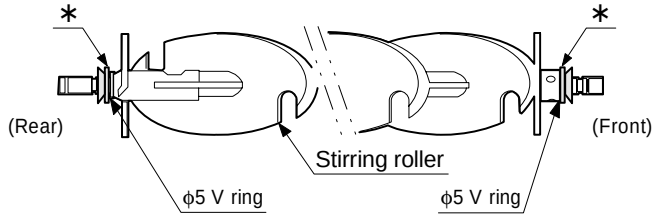
③ Installation of ϕ8V ring, ϕ8 C ring, and ϕ5V ring.

Developing magnet roller

1) Be careful to the V ring direction as shown in the figure above.
2) Allow no clearance between the V ring and the rollers (sections marked with "∗").



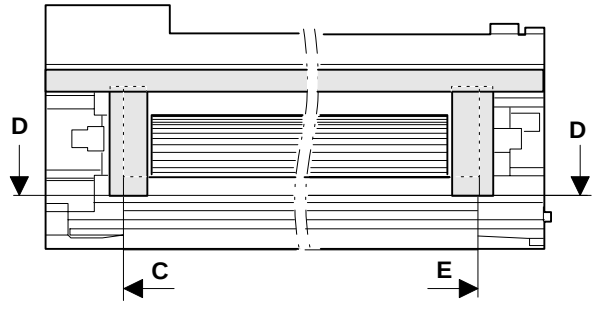




(5) Note for developing side seals F/R attachment

① Attach developing side seal F so that the slit is aligned with line E and the edge with the line D.

② Attach developing side seal R so that the slit is aligned with line C and the edge with line D.



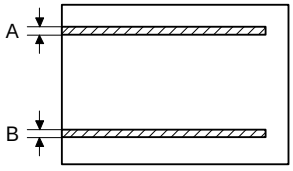
2. Process section

(1) Blank lamp (BL) position adjustment

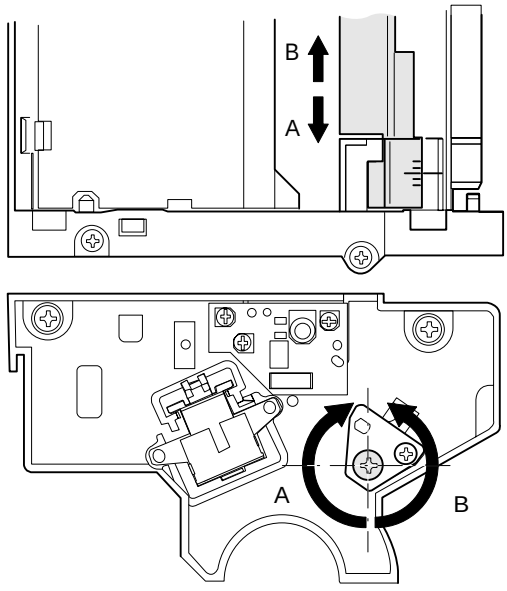
① Check that the enter shift is within 2.0mm. (If the center shift is more than 2.0mm, adjust the center shift.)

② Set an A3 (11" x 17") white paper on the original table, and make a reduction copy (64%) on an A3 (11" x 17") white paper with the original cover open.

③ Measure the sizes of the black background on the both sides. Move the blank lamp unit back and forth to adjust so that the difference of the two sizes is within 1mm.



IA-BI≦1mm

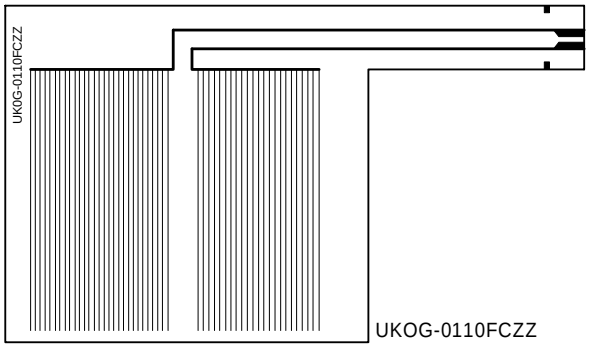


(2) High voltage output balance adjustment

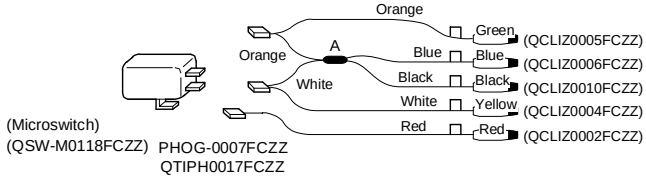
A. Special measurement tool

Tool used: UKOGE0043CS01 (Digital multi meter)

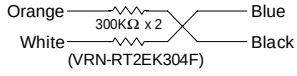
Electrode sheet (UKOG-0110FCZZ)



Electrode sheet harness (DHAI-0304FCZZ)



(Section A wiring diagram)



(VRN-RT2EK304F)

B. Transfer charger current adjustment

① Remove the developing unit, the transfer/separation charger unit, the main charger unit, and the waste toner collection bottle from the copier.

② Remove the process unit from the copier.

③ Remove the photoconductor drum from the process unit. Attach the electrode sheet with rubber band or tape to the photoconductor drum.

④ Install the photoconductor drum with the electrode sheet to the process unit, and install the process unit to the copier.

⑤ Arrange so that the electrode sheet lead wire can be taken out from the developing unit side, and install the drum holder unit to the copier.

⑥ Clean the transfer charger wire and install the transfer/separation charger unit to the copier.
(Do not install the main charger unit.)

⑦ Connect the electrode sheet and the digital multi meter (or an ammeter), and manually turn on the door switch.

⑧ Check the drum current in the front frame side and the rear frame side. The difference between the currents in the front and the rear sides must be within 5.0μA.

a. Turn on the main switch, and execute simulation 8-08. (THVG is turned on for 30 sec.)

b. Measure the drum current in the front side and the rear side.

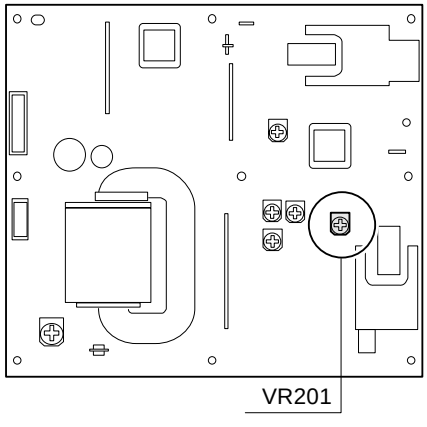
- When the microswitch is OFF, the drum current in the front frame side is displayed.
- When the microswitch is ON, the drum current in the rear frame side is displayed.

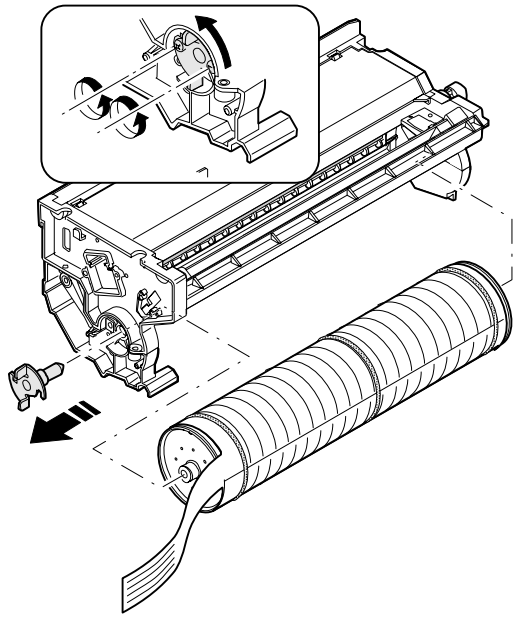
c. Check that the difference between the currents in the front and the rear sides is within 5.0μA. If the difference is more than 5.0μA, the charger unit is defective. Replace it with a new one.

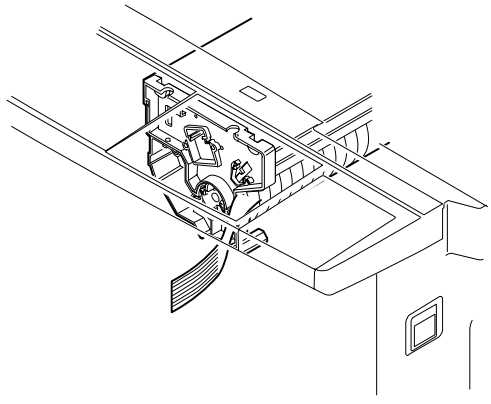
⑨ Adjust the THVG output current.

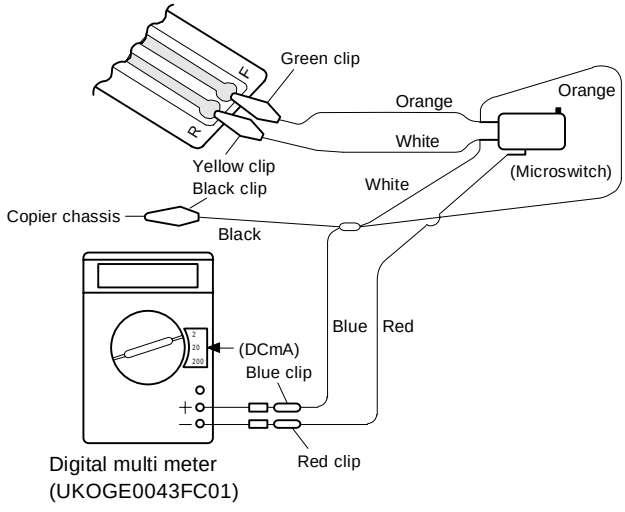
a. Turn on the main switch and execute simulation 8-06.
(THVG turns on for 30 sec.)

b. Adjust the THVG output adjustment volume VR201 so that the THVG output is –62 ±3μA.









Digital multi meter
(UKOGE0043FC01)

(Note) Check that the black clip is grounded to the machine chassis completely.
When UKOGE0043CS01 is used:
Control 1: Set to DCmA.
Control 1: Set to 2.
Red clip: Connect to (+).
Blue clip: Connect to (–).
When a DC ammeter is sued:
Red clip: Connect to (–) of the DC ammeter.
Blue clip: Connect to (+) of the DC ammeter.

C. Charger current check

Check only the difference (balance) in the drum currents in the front frame side and the rear frame side.

① Perform procedures (3)-B-① to ⑤.

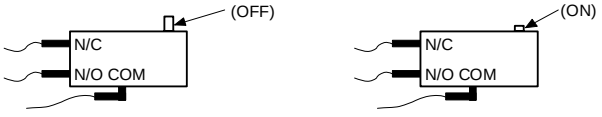
② Clean the main charge saw teeth plate, and install the main charger unit to the copier.
(Do not install the transfer/separation charger.) Manually turn on the door switch.

③ Check the drum current in the front frame side and the rear frame side. The difference between the two currents must be within 10μA.

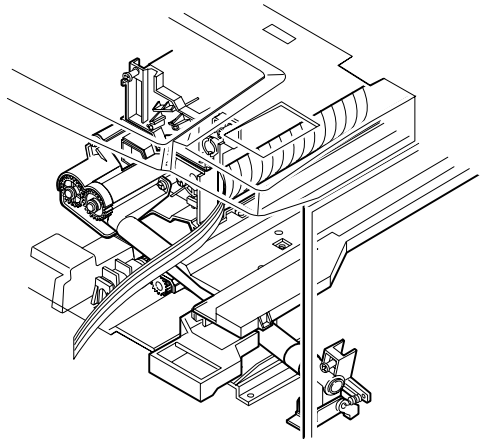
a. Turn on the main switch, and execute simulation 8-08. (MGVG is turned on for 30 sec.)

b. Measure the drum current in the front side and the rear side.

- When the microswitch is OFF, the drum current in the front frame side is displayed.
- When the microswitch is ON, the drum current in the rear frame side is displayed.



c. Check that the difference between the currents in the front and the rear sides is within 10μA. If the difference is more than 10μA, the charger unit is defective. Replace it with a new one.



D. Charger grid voltage adjustment

This adjustment is performed without using the electrode sheet but with the OPC drum.

① Install the DV unit and the drum holder unit to the copier and turn on the power of the copier. (In this case, the electrode sheet is not used.)

② Install the main charger unit to the copier. All charger units must be installed to the copier.

GBNOM (Normal mode)
Set value: 385=727V output
To make the measured voltage smaller:
make the set value smaller. (1 step = 2V)
To make the measured voltage greater:
make the set value greater.

GBTS mode (TSM mode)
Set value: 330=622V output
To make the measured voltage smaller:
make the set value smaller. (1 step = 2V)
To make the measured voltage greater:
make the set value greater.

GBPOTO (Photo mode)
Set value: 338=450V output
To make the measured voltage smaller:
make the set value smaller. (1 step = 2V)
To make the measured voltage greater:
make the set value greater.

(Measurement at the high voltage PWB check point)

③ Remove the rear cabinet.

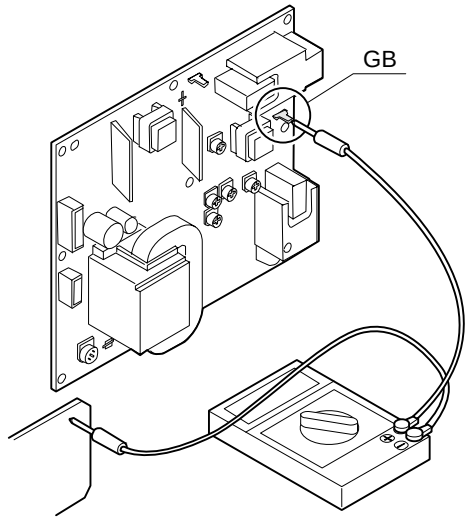
④ Connect the grid voltage output check pin (GB) and the digital multi meter.

⑤ Set the digital multi meter range to DCV range.
(Use a digital multi mater which is able to measure up to DC 1000V.)

⑥ Manually turn on the door switch.

⑦ Turn on the main switch and execute 8-02 (normal mode), 8-03 (photo mode), or 8-04 (TSM mode) to check.

TESTPOINTCP-GB	Output voltage
Normal mode 8-02	–730 ± 5V
TSM mode 8-04	–625 ± 5V
Photo mode 8-03	–450 ± 5V



E. Separation charger output adjustment

This adjustment is performed without the electrode sheet.

① Install the DV unit and the drum holer unit to the copier, and turn on the copier power.

② Install the separation charger unit and the drum holder unit to the copier. All charger units must be installed to the copier.

③ Remove he rear cabinet.

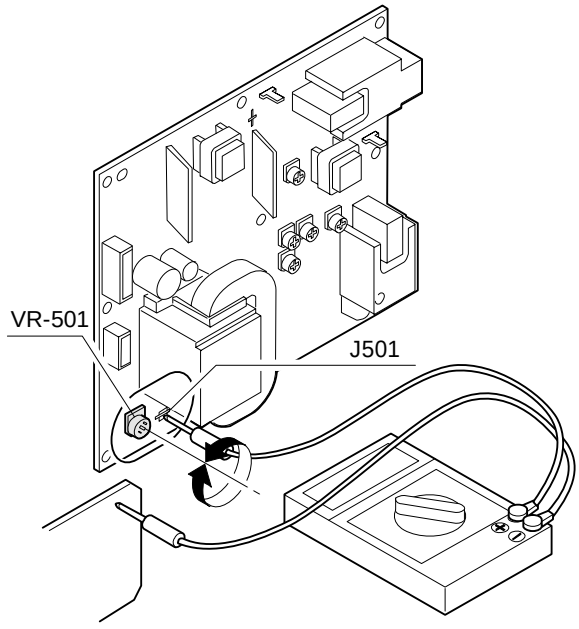
④ Connect the digital multi mater to the SHVG output check pin (J501).

⑤ Set the digital multi meter range to DCV range.

⑥ Manually turn on the door switch.

⑦ Execute simulation 8-07. (The SHVG is turned on for 30 sec.)

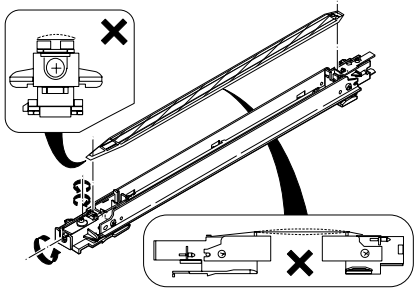
⑧ During execution of the simulation, adjust SHVG output with VR-502 so that the output monitor voltage J501 (bias voltage) of the separation charger is +280V ±20V.



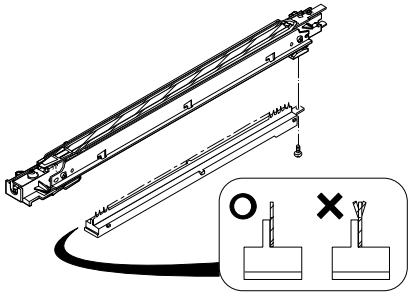
(3) Note for high voltage charger unit maintenance

A. Charger unit

① When handling the screen grid, the screen grid must be free from twists and deformations. It must be securely in the positioning groove.

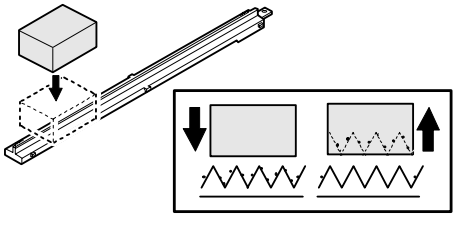


② The saw teeth must be free from deformations.



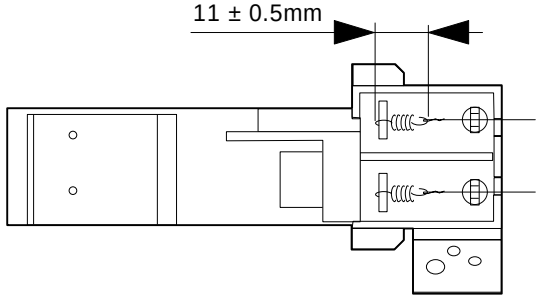
③ Do not touch the inside (the saw teeth side) of the MC case, the screen grid, and the saw teeth.

④ To clean the MC saw teeth, push styrene foam onto the saw teeth at right angles.

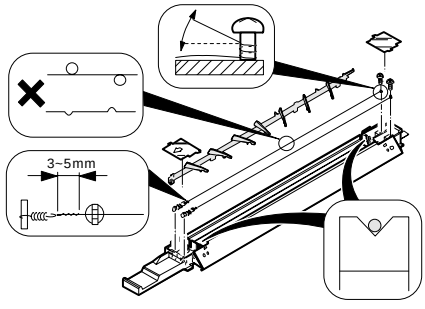


B. Transfer/separation charger unit

① The charger SP length is 11 ±0.5mm.



② The charger wire must be free from twists and deformations. It must be securely in the positioning groove.

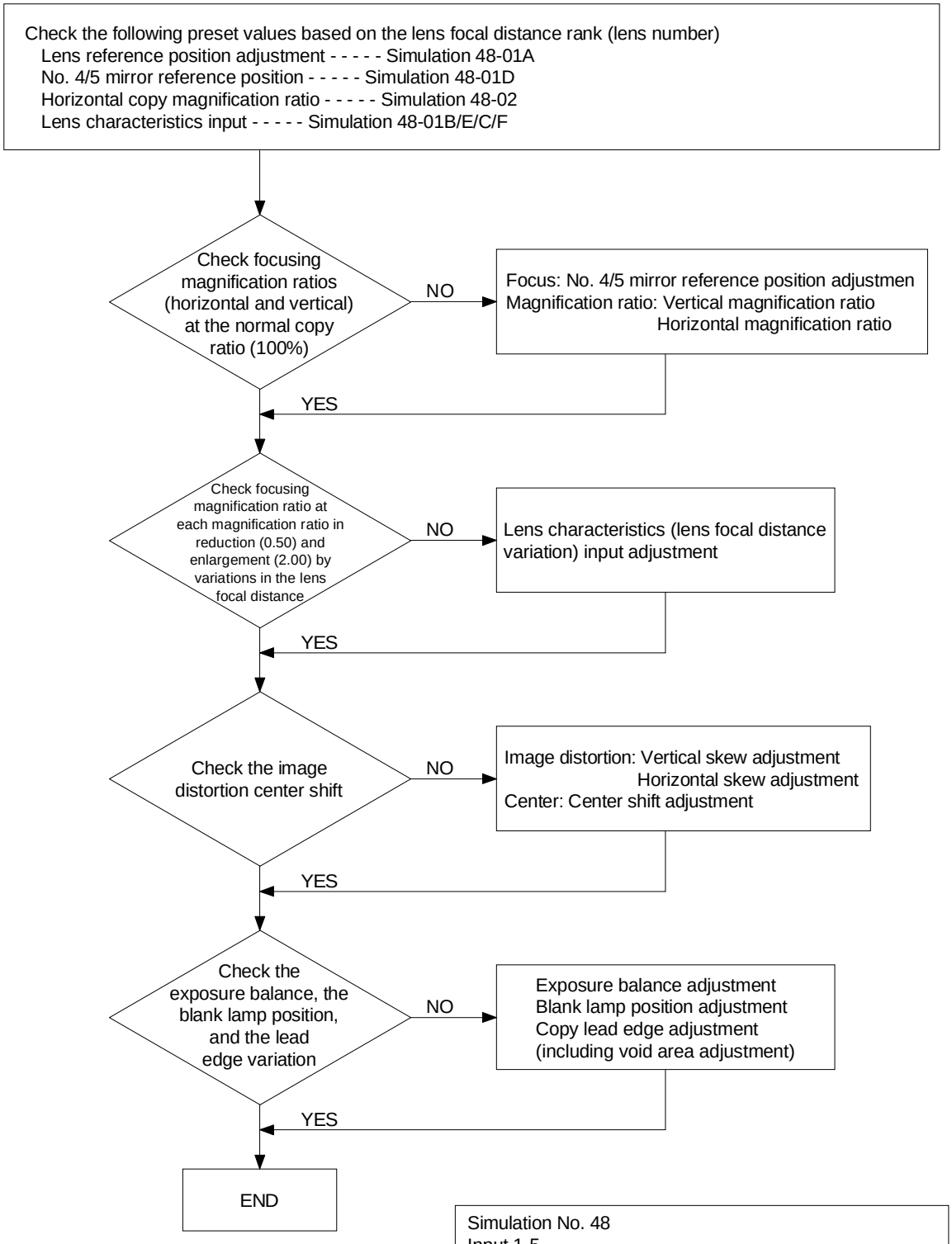


③ The charger case must be free from oil dirt and foreign materials.

④ Clean the wire with alcohol.

3. Optical system adjustments

For adjustments of the optical system, follow the flowchart below.


Check the following preset values based on the lens focal distance rank (lens number)
Lens reference position adjustment - - - - - Simulation 48-01A
No. 4/5 mirror reference position - - - - - Simulation 48-01D
Horizontal copy magnification ratio - - - - - Simulation 48-02
Lens characteristics input - - - - - Simulation 48-01B/E/C/F
Check focusing magnification ratios (horizontal and vertical) at the normal copy ratio (100%)
NO
Focus: No. 4/5 mirror reference position adjustmen
Magnification ratio: Vertical magnification ratio
Horizontal magnification ratio
YES
Check focusing magnification ratio at each magnification ratio in reduction (0.50) and enlargement (2.00) by variations in the lens focal distance
NO
Lens characteristics (lens focal distance variation) input adjustment
YES
Check the image distortion center shift
NO
Image distortion: Vertical skew adjustment
Horizontal skew adjustment
Center: Center shift adjustment
YES
Check the exposure balance, the blank lamp position, and the lead edge variation
NO
Exposure balance adjustment
Blank lamp position adjustment
Copy lead edge adjustment
(including void area adjustment)
YES
END

Necessary tools for adjustment
- Scale (which dos not reflect light)
- Test chart (UKOG-0089CSZZ)
- Plus screwdriver
- Hex wrench

Simulation No. 48
Input 1-5
1. Front/rear direction manification ratio adjustment
2. Paper transport direction magnification ratio adjustment (mirror speed adjustment)
3. Lens characteristics input
4. No. 4/5 mirror characteristics input
5. Mirror speed correction value input

(1) Lens reference position adjustment

In this machine, the reference value for each lens characteristic must be inputted. (This value is used to determine the lens home position.)
This adjustment must be performed in the following cases:

- When the lens is replaced.
- When the mirror base is replaced or its installation position is shifted.
- When the main PWB is replaced.
- When self diag U2 occurs.

(Procedure) Execute simulation 48-01A.
[C] → [=✓] → [0] → [=✓] → [4] → [8] → [PSW] → [1] → [PSW]
When the above key operation is performed, the LCD shows the following display, and the previously set value or "46" is displayed on the copy quantity display.

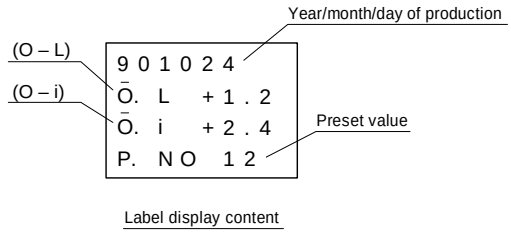
SIMULATION NO. 48-1 INPUT_A (26~66)

Enter the value of [$\overline{O}$.L] (variation in the distance between the original and the lens) specified on the label which is located at A in the figure at the right. Then input the obtained value from the formula and press [PSW] to store it.

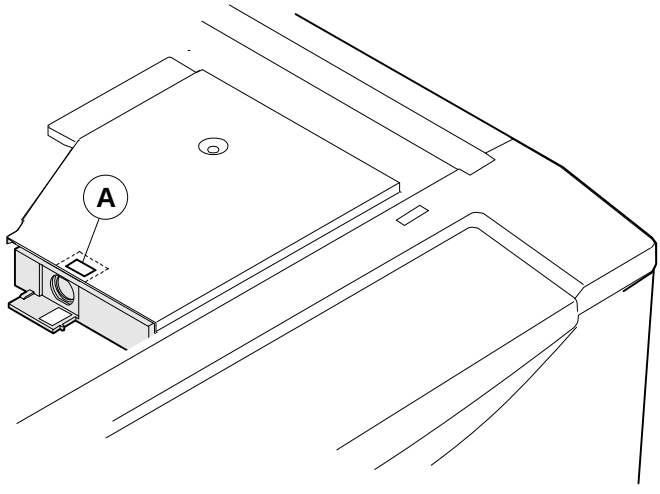
46 – [(O.L. value) × 5] = Corrected reference value

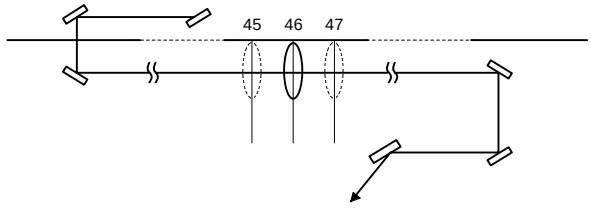
(Example) When the O.L. value is 1.2;

46 – (1.2 × 5) = 40 Input value



Label display content





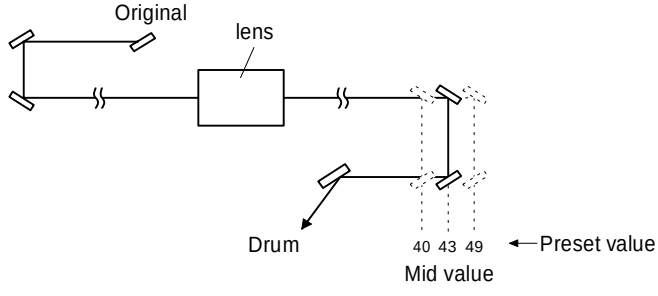
(2) No. 4/5 mirror reference position adjustment

Similarly to the lens reference adjustment, a value based on the lens characteristics must be entered. (It is used to determine the No. 4/5 mirror home position.)
This adjustment must be performed in the following cases:

- When the lens is replaced.
- When the mirror base is replaced or its installation position is shifted.
- When the main PWB is replaced.
- When self diag U2 occurs.

(Procedure) Execute simulation 48-01d.
[C] → [=✓] → [0] → [=✓] → [4] → [8] → [PSW] → [1] → [PSW]
When the above key operation is performed and the message forward scroll key ([→]) is pressed three times, the LCD shows the following display and the previously set value or "49" is displayed on the copy quantity display.

SIMULATION NO. 48-1 INPUT_D (26~66)



Enter the [$\overline{O}$.L] value in the previous displayed in section A of the lens unit in the previous item into the following formula, and input the obtained value and press [PSW] to store it.

49 – [(O.L. value) /2 × 10] = Corrected reference value

(Example) When the value is 1.2,

49 – (1.2/2 × 10) = 43 Input value

The preset value is determined so that the following conditions are satisfied. When the No. 4/5 mirror reference value is greater than the center value (49), the mirror is shifted apart from the lens to lengthen the light path length. When the reference value is smaller than the center value, the mirror is shifted toward the lens to shorten the light path length.

(3) Resolution (focusing) adjustment

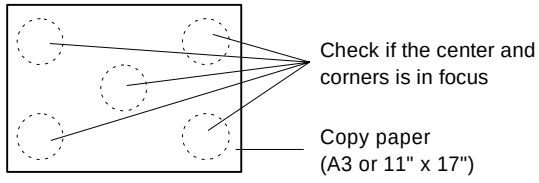
① Execute simulation 48-01 to check that the preset value corresponding to the focal distance rank is set.

[C] → [=✓] → [0] → [=✓] → [4] → [8] → [PSW] → [1] → [PSW]

Execute the above key operation and press the message forward scroll key ([→]) three times (execution of simulation 48-01D). The LCD shows the following display, the preset value is displayed on the copy quantity display, and the ready lamp is lighted.

② If no value is previously set, set the reference set value according to the procedure of "(2) No. 4/5 mirror reference position adjustment. " make a copy with the test chart "UKOG-0089CSZZ" and check the resolution (focusing).

③ Change the set value.
Enter the value to be set.
[ ] → [ ] → [PSW]



(Checking procedure)

After the No. 4/5 mirror reference value adjustment, check as follows.

① Set the test chart (UKOG-0089CSZZ) or the resolution test chart on the original table.

② Make a normal copy with an A3 (11″ × 17″) paper.

③ Check focusing on the copy center and the corners.

④ Check that focusing is proper and that the resolution is above 0.5 line/mm at the center and above 4.5 line/mm at the corners.

If focusing is not proper, shift the preset value of the No. 4/5 mirror reference adjustment by one rank and repeat procedure ② ~ ④. Repeat the above procedure until the above resolution conditions are obtained.

(4) Vertical copy magnification ratio adjustment

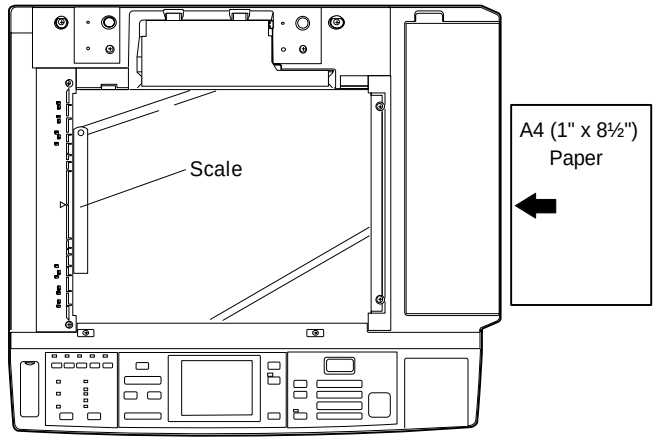
This adjustment must be performed under the state where mirror base A (No. 1 mirror), mirror base B (No. 2/3 mirror), and mirror base C (No. 4/5 mirror) are in parallel (without distortion) and focusing is proper.

This adjustment must be performed in the following cases:

- When the installation position of the lens home position sensor (LHPS) is shifted or the lens home position sensor is replaced.
- When the lens is replaced.
- When the mirror base is replaced or its installation position is shifted.
- When the main PWB is replaced (Not required when only the EEPROM is replaced.)
- When self diag U2 occurs.

① Place the scale on the original table as shown in the figure.

② Make a copy with an A4 (11″ × 8-1/2″) paper.



③ Compare the scale image length on the copy paper and the actual scale length.

④ Calculate the vertical copy magnification ratio correction ratio from the following formula.

Vertical copy magnification ratio correction ratio
= Original size Copy image size/ Original size × 100%

(Example) Vertical copy magnification ratio correction ratio
= 100 – 99/100 × 100%= 1%

⑤ Execute simulation 48-01A.
[C] → [=✓] → [0] → [=✓] → [4] → [8] → [PSW] → [1] → [PSW]
When the above key operation is performed, the preset value of the vertical copy magnification ratio adjustment is displayed on the copy quantity display.

⑥ Calculate the vertical copy magnification ratio adjustment preset value from the following formula.

Vertical copy magnification ratio adjustment preset value
= The previous preset value (displayed in the above procedure ⑤)
+ Vertical copy magnification ratio correction ratio × 10

(Example) Previous preset value = 25, vertical copy magnification ratio correction ratio = 1,

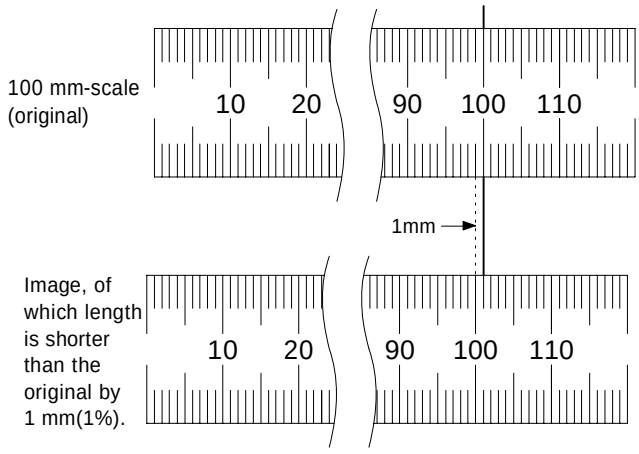
Vertical copy magnification ratio adjustment preset value
= 25 + 1 × 10 = 35

⑦ Enter the vertical copy magnification ratio adjustment preset value.
[ ] → [ ] → [PSW]
When the preset value is changed by 1, the coy magnification ratio is changed by 0.1%.

⑧ Make a normal copy and compare the scale image length and the actual scale length.

⑨ If the scale image length is equal to the actual scale length, the adjustment is completed. If not, repeat procedures ② ~ ⑧ until the above condition is satisfied.

⑩ Cancel simulation 48-01.
Clear all key ON



(5) Horizontal copy magnification ratio adjustment

This adjustment must be performed in the following cases:

- When the main PWB is replaced.
- When the Main PWB RAM is replaced.
- When self diag U2 occurs.
- When the mirror motor is replaced.

The horizontal (paper passing direction) copy magnification ratio is adjusted by changing the mirror base scan speed.
Adjustment procedure

① Place the scale on the original table as shown in the figure, and execute simulation 48-02. The machine goes into the warm-up cycle, and the previously set value (1 ~ 30) is displayed on the copy quantity display. The ready lamp lights up. Under the state, obtain the normal copy magnification ratio correction ratio.

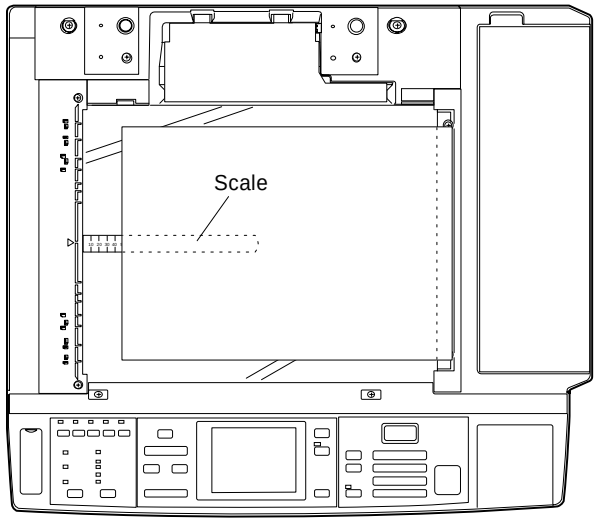
Copy magnification ratio correction ratio
= Original size Copy image size/Original size × 100%

② Replace the displayed value with the copy magnification correction ratio obtained in ①.

(Input value) = (Previously set value) + (Copy magnification ratio correction ratio %) × 10

(Example)
If the previously set value is 15, the input values in example of ① and example of ② are as follows:

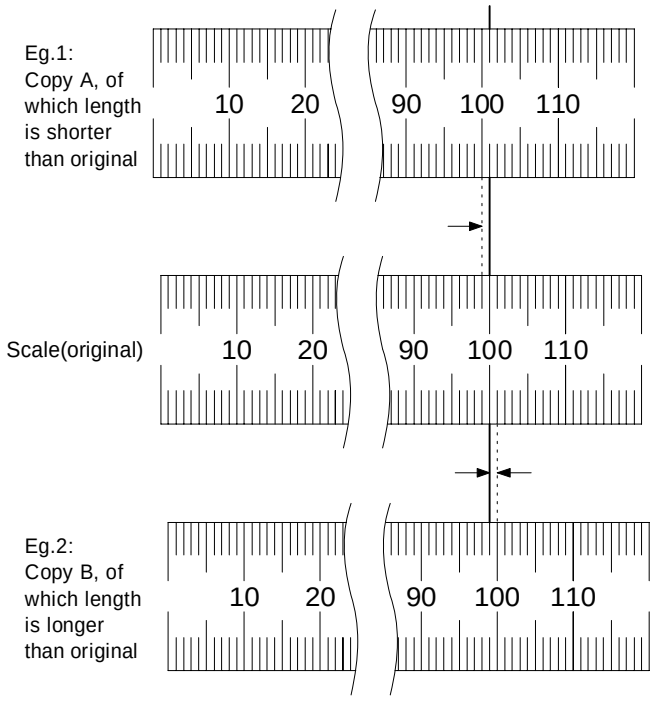
- Example 1: 15 + (–1 × 10) = 5
- Example 2: 15 + (+1 × 10) = 25



When the input value is replaced and the print switch is pressed, the input value is stored and the ready lamp is turned off.

③ Cancel simulation 48-02.

(Note) The range of correction of the input is 1 ~ 30.



(6) Zoom shift correction value input

(Lens characteristics input)

Each lens has a variation in the focal distance, and the lens shift distance at zoom copy must correspond to the lens focal distance.
If the lens shift distance at each zoom copy is fixed to a value regardless of the lens focal distance, the coy magnification ratio will vary in proportion to the radiation in the lens focal distance.

To prevent against the above trouble, the lens focal distance ranks (in the left table) are stored in the memory by the simulation. When zoom copying, the lens shift distance is calculated accordingly to the lens focal distance based on the data to obtain the proper zoom ratio.

(When focusing or the magnification ratio is not proper in zoom copy)

1. When focusing or the magnification ratio is not proper in zoom copy, adjust as follows:
   - When focusing or the magnification ratio of 50% reduction is not proper, change simulation 48-01E setting.
   - When the magnification ratio of 50% reduction is not proper, change simulation 48-01B setting.
2. When focusing or the magnification ratio of 200% enlargement is not proper:
   - When focusing is not proper, change simulation 48-01C setting.
   - When the magnification ratio is not proper, change simulation 48-01F setting.

Comparison between the lens value and the simulation input value

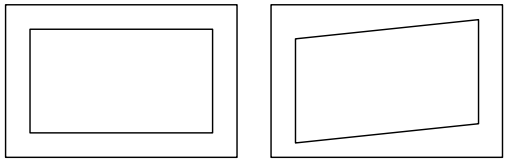
Lens display value	Correction reference value	
O – L	No. 4/5 mirror focus adjustment Sim. 48-01A	Vertical magnification ratio adjustment Sim. 48-01D
–4.0 ~ –3.8	66 ~ 65	89 ~ 87
–3.8 ~ –3.4	65 ~ 63	87 ~ 83
–3.4 ~ –3.0	63 ~ 61	83 ~ 79
–3.0 ~ –2.6	61 ~ 59	79 ~ 75
–2.6 ~ –2.2	59 ~ 57	75 ~ 71
–2.2 ~ –1.8	57 ~ 55	71 ~ 67
–1.8 ~ –1.4	55 ~ 53	67 ~ 63
–1.4 ~ –1.0	53 ~ 51	63 ~ 59
–1.0 ~ –0.6	51 ~ 49	59 ~ 55
–0.6 ~ –0.2	49 ~ 47	55 ~ 51
–0.2 ~ +0.2	47 ~ 45	51 ~ 47
+0.2 ~ +0.6	45 ~ 43	47 ~ 43
+0.6 ~ +1.0	43 ~ 41	43 ~ 39
+1.0 ~ +1.4	41 ~ 39	39 ~ 35
+1.4 ~ +1.8	39 ~ 37	35 ~ 31
+1.8 ~ +2.2	37 ~ 35	31 ~ 27
+2.2 ~ +2.6	35 ~ 33	27 ~ 23
+2.6 ~ +3.0	33 ~ 31	23 ~ 19
+3.0 ~ +3.4	31 ~ 29	19 ~ 15
+3.4 ~ +3.8	29 ~ 27	15 ~ 11
+3.8 ~ +4.0	27 ~ 26	11 ~ 7

For Sim. 48-01B/C/E, use the P. No. attached to the lens as the reference of the input value.

(7) Vertical skew adjustment

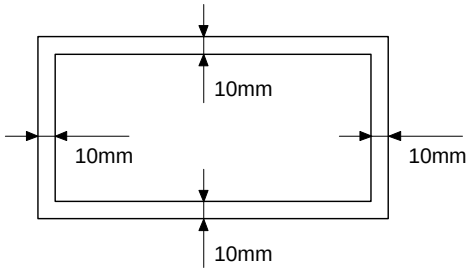
This adjustment must be performed in the following cases:

- When the mirror base drive wire is replaced.
- When No. 1 mirror base and No. 2 mirror base are replaced.
- When a copy as shown below is made.

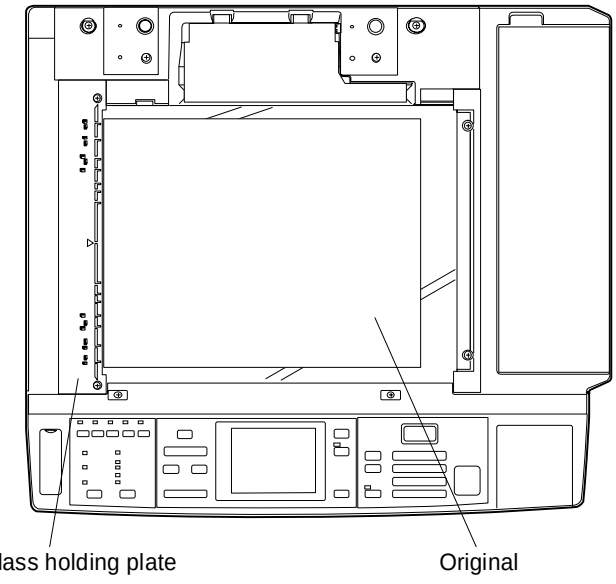


① Making of the original for adjustment

Make the original for adjustment with A3 or 11″ × 17″ paper as shown below.

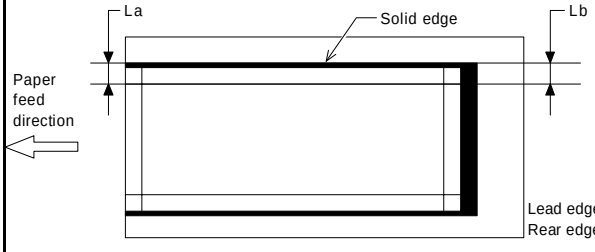


② Place an A3 or 11″ × 17″ paper on the original table neatly to the place as shown in figure at right.



③ With the original cover open, make 90% copy on A3 or 11″ × 17″ paper.

④ Measure La and Lb as shown below:

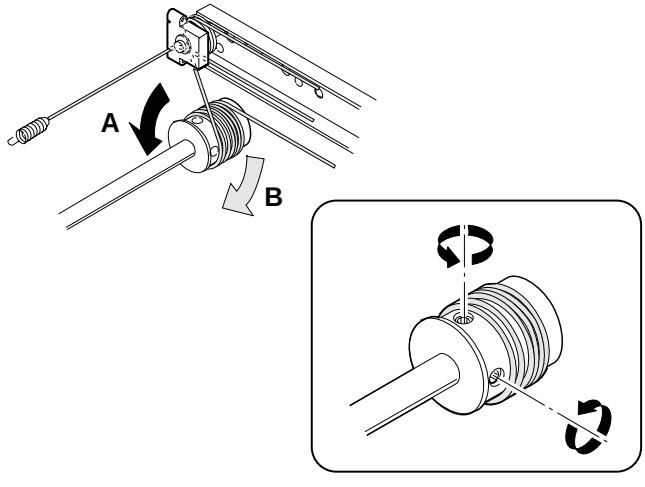


If the lead edge width (La) and the rear edge width (Lb) are the same, there are no need for adjustment (procedures ⑤ ~ ⑧).

⑤ Loosen the fixing screw of the rear frame side mirror base drive pulley.

When La > Lb, rotate the rear frame side mirror base drive pulley in the direction of arrow A. (Do not move the flange and the mirror base drive pulley shaft.)

When La < Lb, rotate the rear frame side mirror base drive pulley shaft in the direction of arrow B. (Do not move the flange and the mirror base drive pulley shaft.)



⑥ Tighten the fixing screw of the mirror base drive pulley.

⑦ Perform procedures ① ~ ④.25P9M

⑧ Perform procedures ⑤ and ⑥ if La in not equal to Lb. (If La = Lb, the adjustment is completed.)

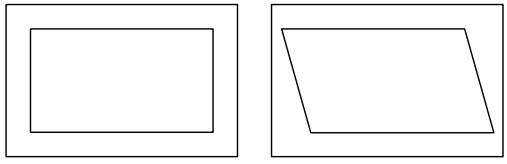
Repeat procedures ① ~ ⑦ until La = Lb is obtained.

(8) Horizontal skew adjustment

If there is no skew in the mirror base scanning direction and the right angle to the scanning direction is not proper, adjust the height of the No. 2/3 mirror base unit rail and the No. 4/5 mirror base unit eccentric screw.

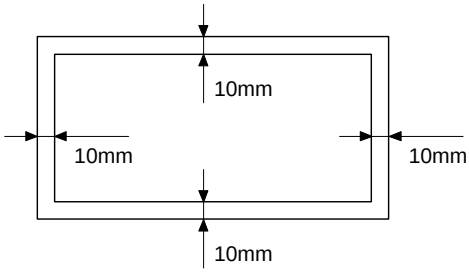
This adjustment must be performed in the following cases:

- When the mirror base drive wire is replaced.
- When the No. 1 mirror base and the No. 2 mirror base are replaced.
- When the No. 2 mirror base rail is replaced or shifted.
- When a copy as shown below is made.



① Making of the original for adjustment

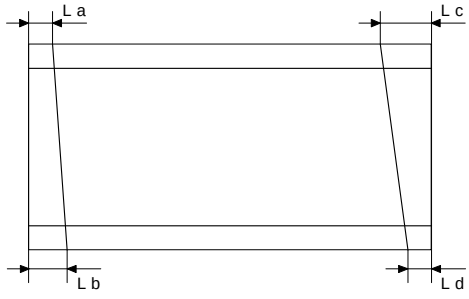
Make the original for adjustment on A3 or 11″ × 17″ white paper as shown below.



② Place the original on the original table neatly to the position of A3 or 11″ × 17″.

③ Make a normal (100%) copy on A3 or 11″ × 17″ paper.

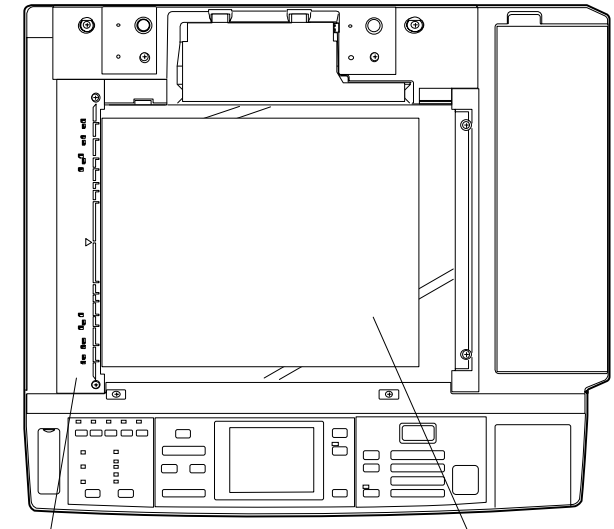
④ Measure the distances at four corners as shown below. (La, Lb, Lc, Ld)

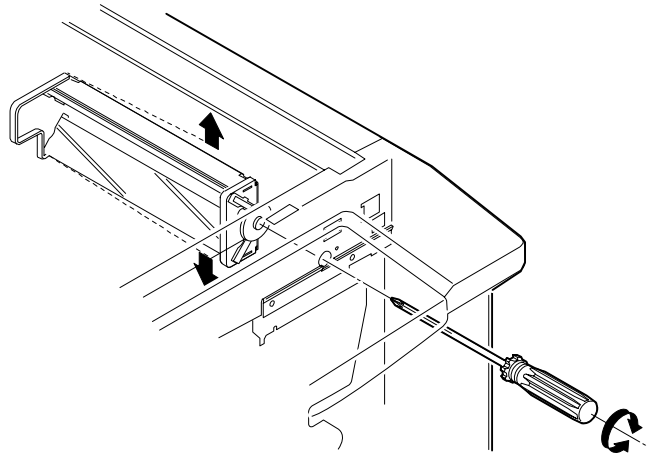


When La = Lb and Lc = Ld, there is no need for adjustment.

Adjustment procedure 1

① When La > Lb (Lc > Ld), turn the adjustment screw clockwise to increase the height of the front frame side of the No. 4/5 mirror base unit.





② When La < Lb (Lc < Ld), turn the adjustment screw counterclockwise to decrease the height of the front frame side of the No. 4/5 mirror base unit.

Take note on how much the adjustment screw is rotated.
(One rotation of the adjustment screw will change the height by 2mm, and the difference of La – Lb will be changed by 4mm.)

※ Open the front cabinet and adjust through the adjustment hole. Adjust in the same manner as ① and ② so that La = Lb and Lc = Ld.

If the above adjustment is not satisfactory, then follow the procedure below.

Adjustment procedure 2

① Move the mirror base B rail position up and down (in the arrow directions).

When La > Lb, shift the paper exit side mirror base B rail upward by half of the difference of La – Lb.

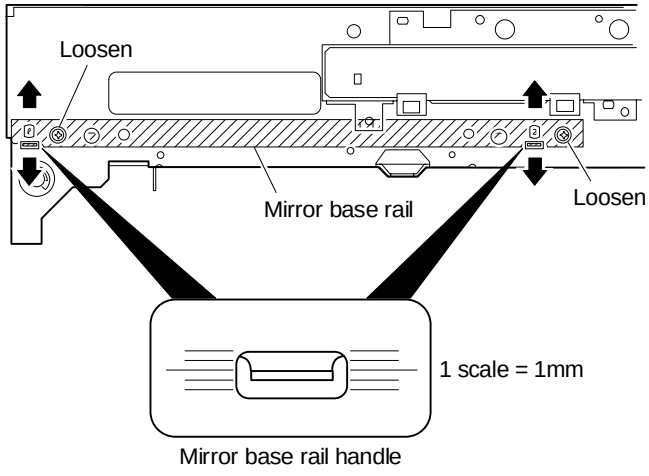
When La < Lb, shift the paper exit side mirror base B rail downward by half of the difference of La – Lb.

(Example) When La=12 and Lb=9, shift the paper exit side mirror base B rail upward by 1.5.
When Lc > Ld, shift the paper feed side mirror base B rail downward by half of the difference of Lc – Ld.
When Lc > Ld, shift the paper feed side mirror base B rail upward by half of the difference of Lc – Ld.
(When moving the mirror base rail, hold he mirror base rail handle to move the rail.)

② Adjust in the same manner as ① so that La=Lb and Lc=Ld.

③ After completion of adjustment, rotate the mirror base drive pulley manually to full scan the mirror base A and mirror base B, and check that the both mirror bases do not make contact with each other.

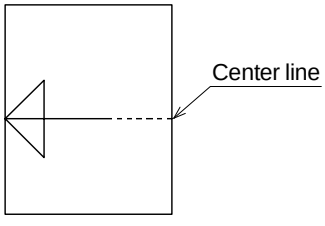
(Note) When the mirror base rails is moved extremely, the mirror bases may make contact each other. Be careful of that.

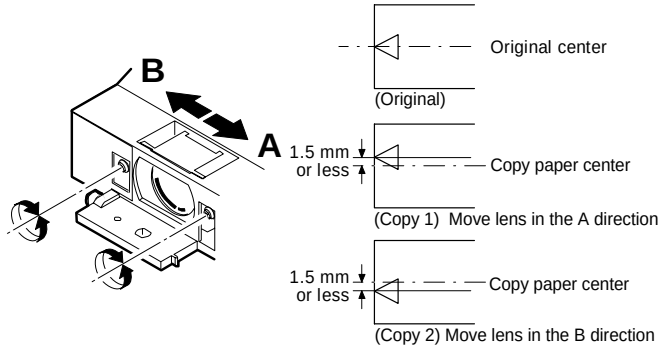


(9) Center shift adjustment

For the center shift adjustment, make the original s shown below and make a normal (100%) copy of it. Adjust the lens so that the center image shift from the original center is within 1.5mm.

(Note) When the lens is moved, be sure to adjust the blank lamp position. The blank lamp position is changed by changing the original center reference position.



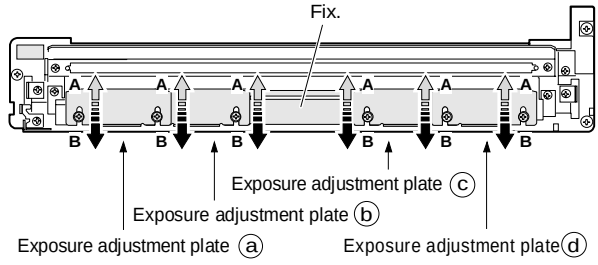


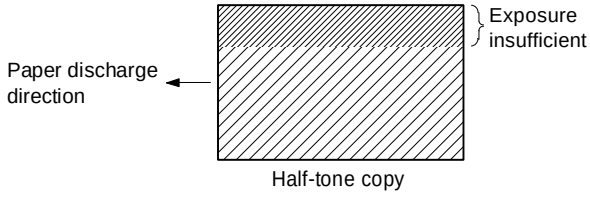
(10) Exposure balance adjustment

Make a half tone copy at normal ratio (100%), and adjust exposure adjustment plates a, b, and c in the directions of arrows A and B. Moving the adjustment plate in the direction of arrow A make the copy darker, and moving in the direction of arrow B makes the copy lighter.

(Example) When a copy as shown at right was made, move the exposure adjustment plate in the direction of arrow B to take balance of exposure.

Since the center section slit is fixed, the adjustment must be performed based on the exposure level at the center as the reference.





(11) Copy lead edge adjustment

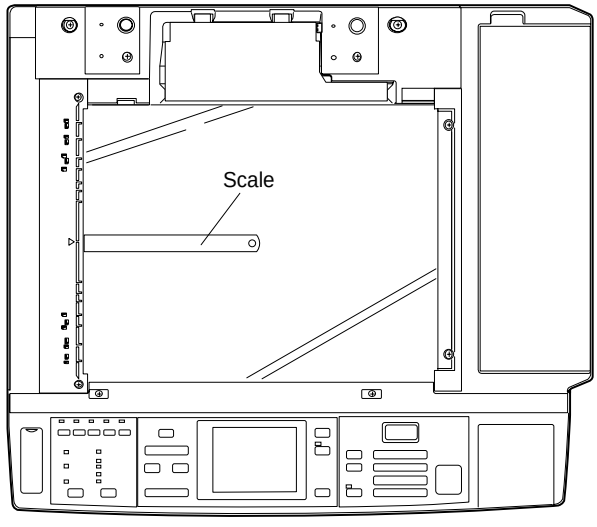
The copy led edge adjustment is performed with simulation 50-01 and 50-02.

(Normal copy) Image loss: 0 ~ 4mm
Void area: 1 ~ 3mm

SIMULATION NO. 50
INPUT (1~4)
1. LEAD EDGE, LEAD EDGE VOID AREA ADJUSTMENT.
2. LEAD EDGE ADJUSTMENT. (INPUT)
3. LEAD EDGE/VOID ADJUSTMENT. (INPUT)
4. VOID ADJUSTMENT. (INPUT)

<Setting with simulation 50-01>

LCD DISPLAY	COPY QUANTITY DISPLAY	
INPUT_A (0~99)	* * *	: Distance from MHP to image lead edge (1 count = 0.47mm)
		↓ SCROLL KEY (➔) ON
INPUT_B (0~99)	* * *	: Time data from image lead edge to PSC ON (1 count = 0.5ms)
		↓ SCROLL KEY (➔) ON
INPUT_C (1~20)	* * *	:
		↓ SCROLL KEY (➔) ON
INPUT_D (0~20)	* * *	: Lead edge void amount data(1 count = 0.47mm)



Adjustment procedure

① Put a scale on the original table.

② [C] → [=✓] → [0] → [=✓] → [5] → [0] → [PSW] → [1] → [PSW]
When the above key operation of simulation 50-01 is executed, the machine starts warming up.
The ready lamp is lighted and the previously set value (RRC-A value: distance from MHP to the image lead edge (1 ~ 99) is displayed.)

③ Set values A and B to zero, and make copies at 100% and 200%.

- [0] → [0] → [P] → [→] → [0] → [PSW] (A copy at 100% is made.)
- [Enlargement] key → (Lens shift, ready) → [PSW] (A copy at 200% is made.)

④ Measure the distance from each copy paper lead edge and the image (scale) edge, and obtain RRC-A and RRC-B from the formulas below.

If the RRC-A preset value is not proper, the image lead edge varies in different magnification ratios. The RRC-B value is the preset value used for adjusting ON timing of the RRC in order to fit the drum image edge and the transfer paper edge.

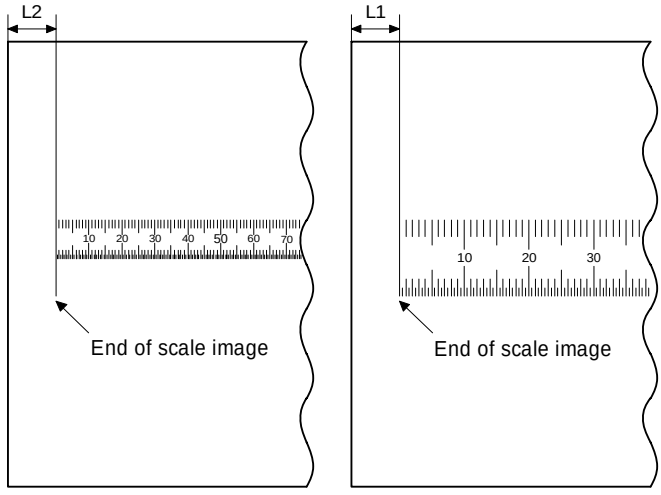
- L1: Lead edge shift at 200% (mm)
- L2: Lead edge shift at 100% (mm)
- RRC-A = 2.122 × (L1 – L2)
- RRC-B = 11.111 × L2 – 5.556 × L1

⑤ Enter the RRC-A value and the RRC-B value obtained from the above formulas with the 10-key pad and press the program (P) key to store it.

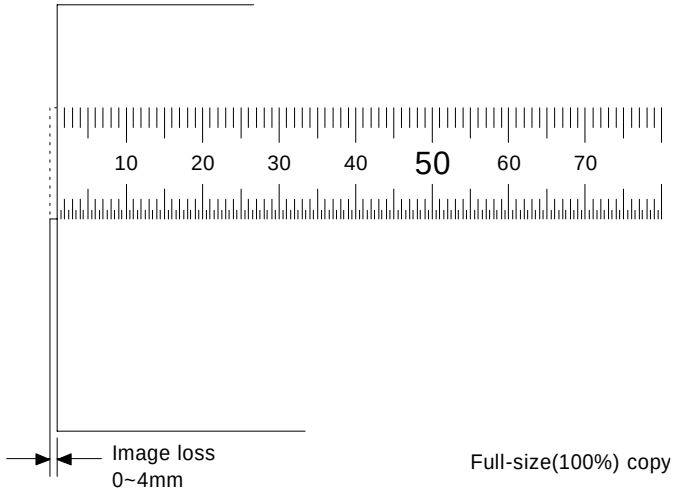
⑥ Make copies at 200%, 100% and 50% and check the variations in zooming ratios. (About 1.0mm)
If there are considerable variations, repeat the above procedures from ③.

⑦ Make a normal copy to check that the lead edge image loss is within 0 ~ 3mm. If not, change the RRC-B value and adjust again until the image loss is within the above range. (The greater the value is, the smaller the image loss is.)

(Note) The above image loss adjustment is effective only for the simulation and the adjustment value is not the final adjustment value.

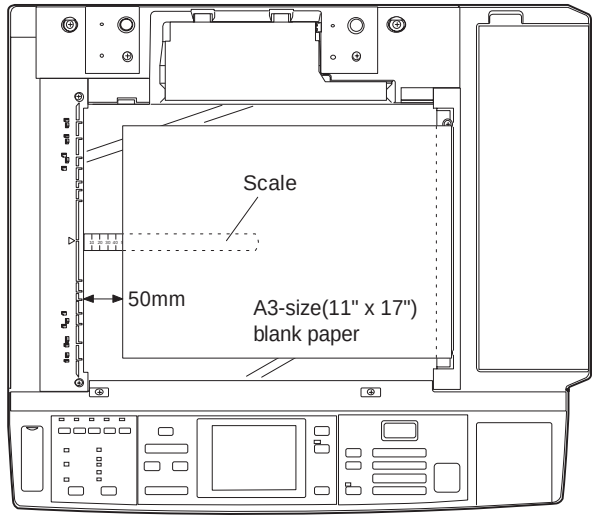


full-size(100%) copy　　Enlarged(200%) copy



Full-size(100%) copy

⑧ Set the scale and an A3 (11″ × 17″) paper on the original table as shown in the figure at right.



⑨ Press the message forward scroll key three times to set the LCD section to the void amount adjustment mode.

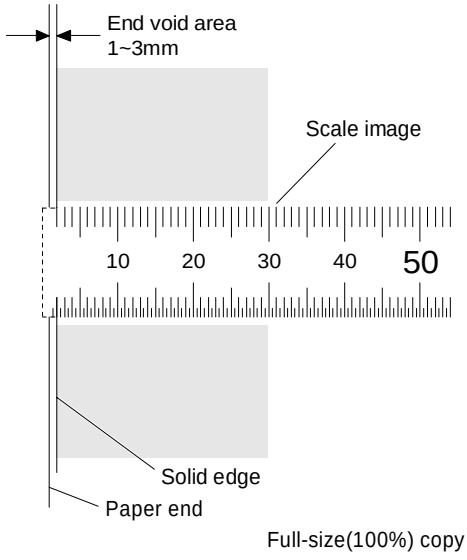
⑩ Make a copy with the OC cover open. Adjust so that the edge of the black background copy comes to 1 ~ 3mm of the copy scale image. When the normal copy lead edge void area adjustment set value is changed by 1, the void area is varied by about 0.5mm. The greater the set value is, the greater the void area is.

⑪ Make a normal copy and check that the image loss and the void area are within the specified range.

(Specified values) Image loss: 0 ~ 4mm
Void area: 1 ~ 3mm

⑫ Press the clear key to cancel simulation 50-01.

(Note) When the RRC-A and the RRC-B values are changed with simulation 50-01, be sure to adjust the copy lead edge void area.



Full-size(100%) copy

<Setting with simulation 50-02>

The key operations and the displays are the same as those of simulation 50-01. In simulation 50-02, the lead edge adjustment can be simply performed by directing setting the L1 and L2 values.
The void area adjustment is also the same as that of simulation 50-01.

Adjustment procedure

① Put the scale on the original table.

② [C] → [=✓] → [0] → [=✓] → [5] → [0] → [PSW] → [2] → [PSW]
With the above key operation, simulation 50-02 is executed and the machine starts warming up.

- L1: Lead edge shift amount at 200% (○○○mm, 3 digits)
- L2: Lead edge shift amount at 100% (△△△mm, 3 digits)

③ Use the message forward scroll key ([→]) and the program key ([P]) and the 10-key pad to set L1 and L2 to zero, and make copies at 100% and 200%.

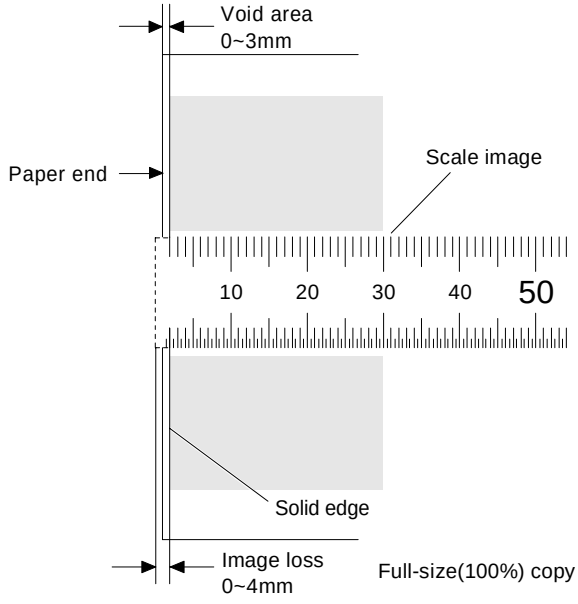
- [0] → [0] → [0] → [P] → [→] → [0] → [0] → [0] → [PSW] (A copy at 100% is made.)
- [Enlargement] key → (Lens shift, ready) → [PSW] (A copy at 200% is made.)

④ For each of 100% and 200% copies, measure the distance between the paper lead edge and the scale image lead edge, and enter L1 and L2 with the message forward scroll key ([→]) and the program key ([P]) and the 10-key pad. With this procedure, the RRC-A and the RRC-B values of simulation 50-01 are automatically calculated and stored.

Input procedure

(Example) When L1 is 24.5mm and L2 is 15.0mm.
[2] → [4] → [5] → [P] → [→] → [1] → [5] → [0] → [PSW]

⑤ After that, check and adjust shifts in zooming and the image void loss amount similarly to simulation 50-01.

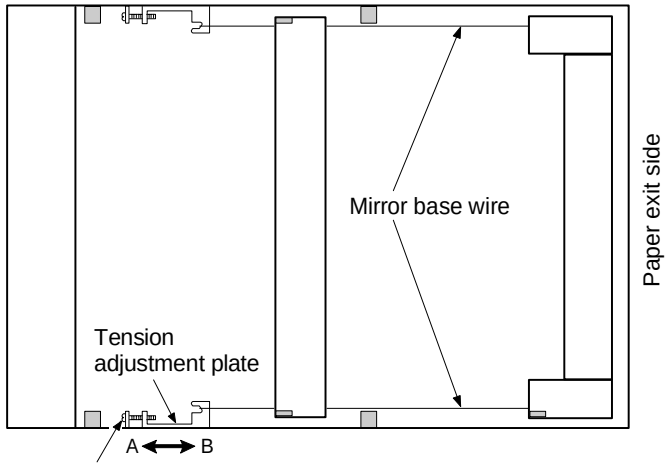


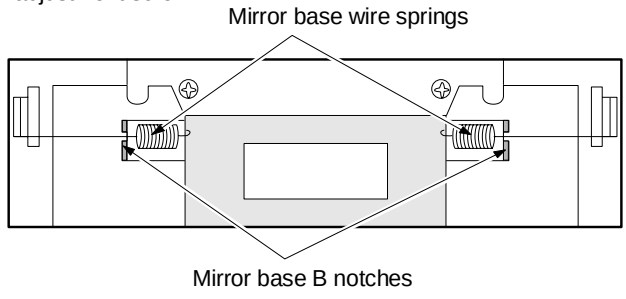
Full-size(100%) copy

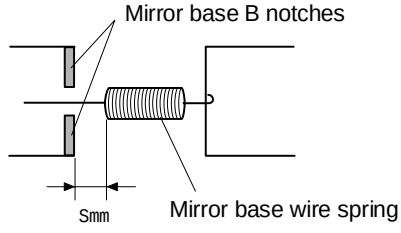
(12) Mirror base wire tension adjustment

Use the mirror base adjustment screw to shift the tension adjustment plate back and forth and adjust.

When the mirror base B is at the home position, adjust so that the distance between the notched sections and the mirror base wire springs are about 4mm. (When the mirror base adjustment screw is rotated in clockwise, the tension adjustment plate is shifted toward A. That is, the distance between the notched section and the wire spring becomes smaller.)







4. Copy density adjustment

(1) When the copy density adjustment is required:

The copy density adjustment must be performed in the following cases:

- When in maintenance
- When the charging/transfer charger output current and the separation charger bias voltage and the grid voltage are adjusted. (When the charger unit and he high voltage unit are replaced.)
- When the developing bias is adjusted.
- When any part in the AC PWB unit is replaced.
- When AE sensor is replaced.
- When the copy lamp is replaced.
- When the optical unit is replaced.
- When the optical unit is disassembled, repaired, or adjusted.
- When the exposure adjustment plate is moved.
- When the drum is replaced.
- When the main PWB is replaced.

(2) Note for copy density adjustment

Before the copy density adjustment, perform the following items.

① Clean the optical system (the table glass, the lens, the mirrors, the copy lamp. the reflector).

② Clean the AE sensor. (With a cloth immersed with water or alcohol, clean the photo sensor surface.)

(Note: If the photo sensor surface is cleaned with a dry cloth, static electricity is produced to attract dusts.)

③ Clean the charger wire (transfer/separation) and the screen grid.

④ Clean the blank lamp and the discharge lamp around the drum holder.

⑤ Clean the drum cleaning blade. (After cleaning, be sure to apply starting powder.)

(Note)
- First perform the manual exposure copy density adjustment, then perform the auto exposure copy density adjustment. Do not reverse the sequence.
- This model performs the correction to the optical system dirt automatically.
  When simulation 46 is executed, the correction in each mode is set to the initial state. When simulation 46 is executed, adjust in all exposure modes.
- This model performs the correction against decreasing sensitivity by long use automatically. When simulation 24-07 is executed, the correction is set to the initial state. Execute simulation 24-07 before executing simulation 46-01.

(3) Preliminary arrangement for the copy density adjustment

(1) Initial setting of AE copy density level

① Enter the key operator code.

② Execute program No. 20.
The LCD shows the following display.

```
P.20: AUTO EXPOSURE ADJUST.
1. LIGHTEST    2. LIGHTER    3. NORMAL
4. DARKER      5. DARKEST
```

③ Select "3" with the 10-key pad.

④ Cancel the set mode with the [CA] key.

(2) TSM mode initial setting

① Execute program No. 22.

```
P22: TONER SAVE MODE.
1. YES          2. NO
```

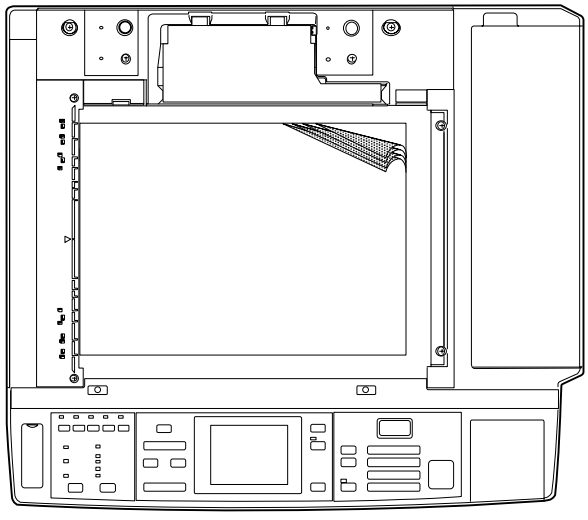
② Set the mode to the toner save mode with the 10-key pad.

(3) AE sensor level adjustment

① Execute Sim 47. (The mirror base scans and stops at the AE sensor level measurement point.)

② Put 4 or 5 sheets of A3 (11" x 17") paper on the original table.

③ Press the START key again, and the AE sensor output level with the white paper original will be displayed on the copy quantity display.
The output level is stored.



(4) Drum sensitivity setting

① Execute simulation 26-07 and check that the top of the 9-digit drum number printed on the flange in the drum front frame side is displayed on the copy quantity display.

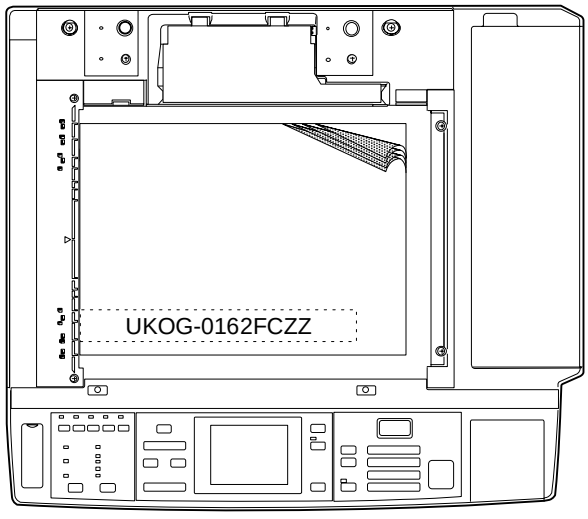
② If the display is different from the drum number, press the 10-key pad to change the setting.

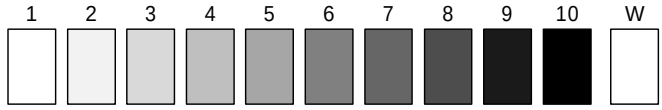
(Note) When entering with the 10-key pad, the display is limited to 1 ~ 3 only.

(5) Test chart setting

① Put 4 or 5 sheets of white paper (specified by Sharp) of 120mm wide and 420mm long on the original table in the center reference.

② Place the test chart (UKOG-0162FCZZ) as shown in the figure below.





Test chart comparison table

UKOG-0162FCZZ DENSITY No.	1	2	3	4	5	6	7	8	9	10	W
UKOG-0089CSZZ DENSITY No.	0,1		0.2		0.3				0.5	1.9	0
KODAK GRAY SCALE		1		2		3		4		19	A

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(6) Copy density adjustment

A. Developing bias output voltage check

Execute simulation 8-01 to check that the developing bias output is –200V ±5V.

B. Manual density adjustment

(1) Normal mode adjustment

① Execute simulation 46 for copy density adjustment.
The exposure data of the manual density mode is displayed on the copy quantity display.

② Check that "1" of the manual density mode is displayed on the LCD panel.
If the display is other than "1," set the manual density mode to "1" with the exposure select key and the exposure key.

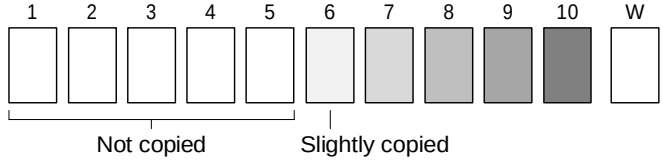
③ Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied (0.5 of UKOG-0089FCZZ is clearly copied).

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



④ When the copy density is within the specified range, press the dark exposure key to set the manual exposure mode "5."

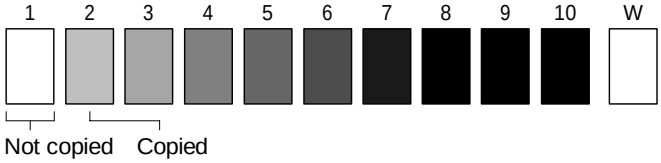
⑤ Make a copy.

Check that "2" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is clearly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



(2) Toner save mode adjustment

① Press the exposure select key to set to the manual density mode. Press the message forward scroll key to display "1" of the toner save mode on the LCD panel.

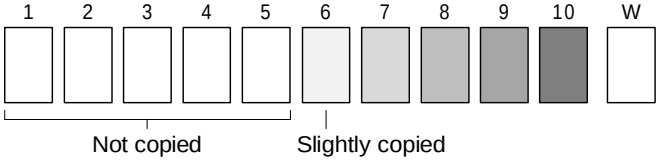
② Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied (0.5 of UKOG-0089FCZZ is clearly copied).

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



③ When the copy density is within the specified range, press the dark exposure key to set to the photo mode "5."

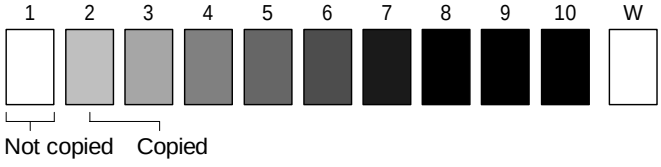
④ Make a copy.

Check that "2" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is clearly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



C. Photo mode adjustment

① Press the exposure select key to set to the photo mode.
Check that "1" of the photo mode is displayed on the LCD panel.

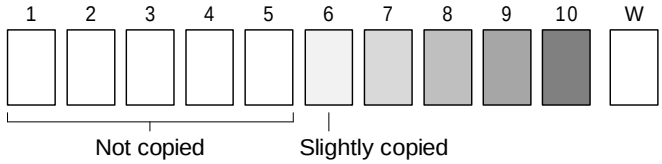
② Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied (0.5 of UKOG-0089FCZZ is clearly copied).

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



③ When the copy density is within the specified range, press the dark exposure key to set to the photo mode "5."

④ Make a copy.

Check that "2" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is clearly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.

D. Auto exposure (AE) mode adjustment

(1)

① Press the exposure select key to set to the auto exposure mode.

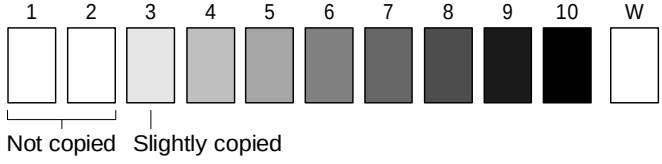
② Make a copy.

Check that "3" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is slightly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



(2) Auto exposure (toner save mode) adjustment

① Check that the mode is set to the auto exposure mode, and press the message forward scroll key (→) to display the toner save mode on the LCD panel.

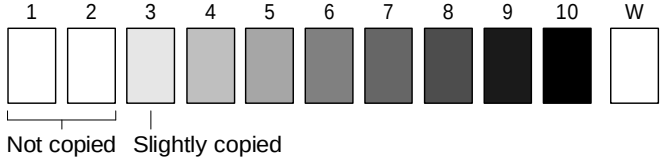
② Make a copy.

Check that "3" of UKOG-0162FCZZ (0.2 of UKOG-0089FCZZ) is slightly copied.

<When too light> Make the value displayed on the copy quantity display smaller.

<When too dark> Make the value displayed on the copy quantity display greater.

※ The range of set values is 450 ~ 800.



Copy density adjustment procedure

Item	Content
(1) Auto exposure copy density level	3 (Normal level)
(2) TSM mode initial setting	1 (Normal mode)
(3) AE sensor characteristics measurement	Execution of Sim 47
(4) Drum sensitivity setting	Execution of Sim 26-07
(5) Test chart setting	Test chart comparison table

UKOG-0162FCZZ DENSITY No.	1	2	3	4	5	6	7	8	9	10		W
UKOG-0089CSZZ DENSITY No.	0,1		0.2		0.3				0.5	1.9		0
KODAK GRAY SCALE		1		2		3		4		19		A

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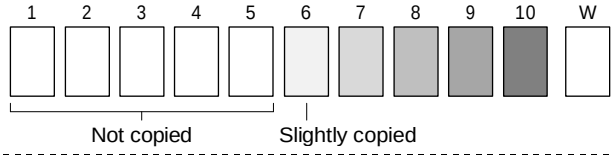
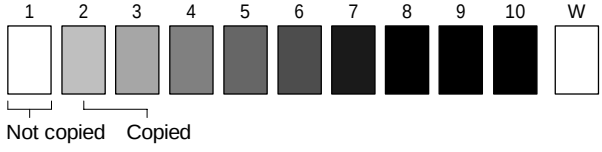
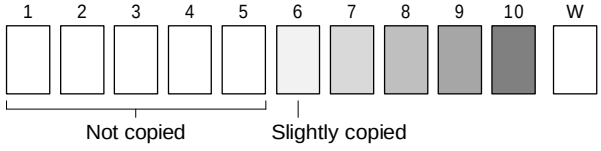
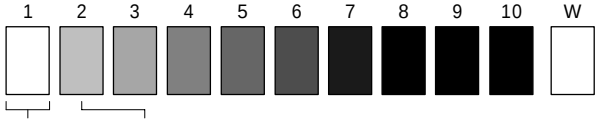
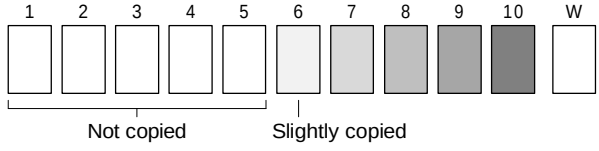
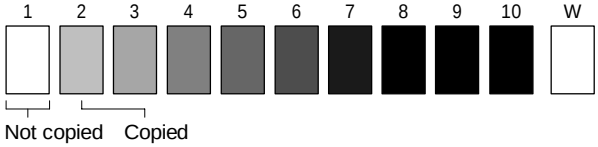
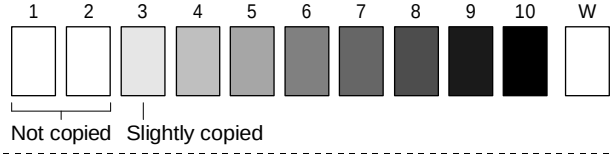
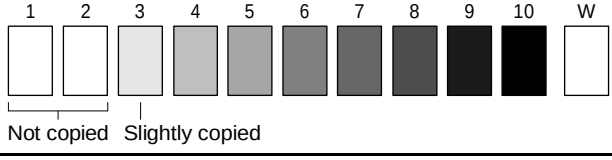
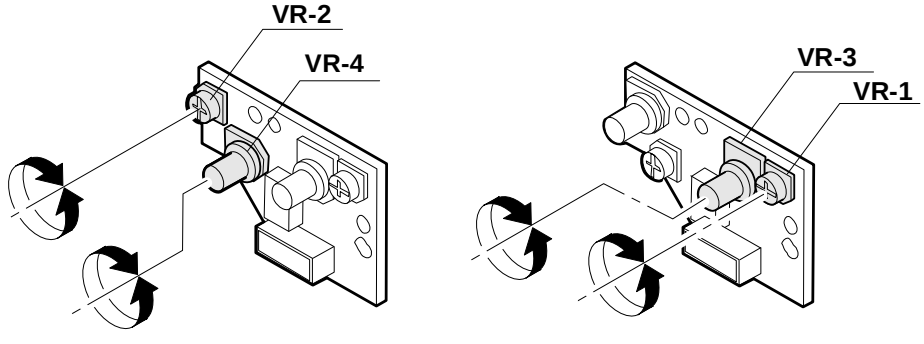
(6) Copy density adjustment		
A. Developing bias output voltage adjustment		–200V ±5V (manual exposure 1). Execution of Sim 8-01.
B. Manual exposure copy density adjustment		Execution of Sim 46-01.
	Manual exposure mode /1	
	Manual exposure mode /5	
C. TSM mode copy density adjustment		
	Toner save mode /1 (manual)	
	Toner save mode /5 (manual)	
D. Photo mode coy density adjustment		
	Photo mode /1	
	Photo mode /5	
E. Auto exposure copy density adjustment		
	(1) Normal mode	
	(2) TSM mode	

5. Adjustments related to process control

Item							Conditions where the process control is required:	Remark
1	2	3	4	5	6	7		
–	–	○	○	○	○	○	A. When a new machine is installed.	"4" differs in different destinations.
–	○	○	–	○	○	○	B. When the developer is replaced.	
–	○	○	○	–	○	○	C. When the photoconductor is replaced.	
–	–	–	–	–	○	–	D. When the process control sensor is cleaned/replaced.	
–	–	–	–	–	○	–	E. When the marking sensor is cleaned/replaced.	
–	○	○	–	–	–	○	F. When the dirt correction sensor is cleaned/replaced.	
–	○	○	–	–	–	○	G. When the AE sensor is cleaned/replaced.	
–	○	○	–	–	–	○	H. When the optical system is cleaned.	
–	○	○	–	–	–	○	I. When the standard white board is cleaned.	
○	○	○	–	–	–	○	J. When the high voltage output is adjusted.	

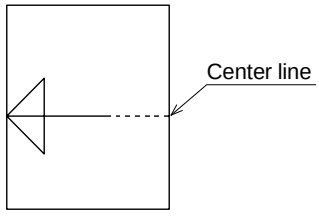
Item		Sim No.	Content
1	Developing bias voltage/grid bias voltage/drum current adjustment	8 – 1 8 – 2 8 – 3 8 – 4 8 – 6 8 – 7	<table><tr><th></th><th>Japan</th><th>EX</th></tr><tr><td>Developing bias</td><td colspan="2">–200 ± 5V</td></tr><tr><td>MC (N)</td><td>–730 ± 5V</td><td>–730 ± 5V</td></tr><tr><td>MC (P)</td><td>–500 ± 5V</td><td>–450 ± 5V</td></tr><tr><td>MC (T/S)</td><td>–675 ± 5V</td><td>–625 ± 5V</td></tr><tr><td>TC</td><td colspan="2">–1.2 ± 3μA IF – RI = 5μA</td></tr><tr><td>SC (DC component)</td><td colspan="2">+280 ± 20V</td></tr></table>
2	AE adjustment level check and adjustment	20 (Key operator code)	Check that the AE adjustment level is at the standard level. If not, set it to the standard level.
3	AE sensor gain adjustment	47	The AE sensor gain is automatically adjusted.
4	Drum installation Film wear counter and drum sensitivity adjustment	24 – 7 26 – 7	The film wear counter is reset. The drum sensitivity is set.
5	Developer supply Developer adjustment	25 – 2	The toner density reference value is set.
6	Drum marking/image density sensor output check and adjustment	44 – 2 44 – 3	Drum marking sensor/image density sensor output check ○ Drum marking sensor: 170 ±10 (Rough adjustment control (VR-1) and minute adjustment control (VR-3)). Refer to the figure below. ○ Process control sensor 815 ±15 (Rough adjustment control (VR-2) and minute adjustment control (VR-4)). Refer to the figure below. If the value is outside the above range
7	Copy quality adjustment	46	Follow the exposure adjustment procedure. ※ (Note) When simulation 46 is executed, the dirt correction reference is registered. Therefore, before executing simulation 46, clean the optical system and check and adjust the copy picture quality. (In all modes.) If simulation is cancelled without checking and adjusting in all modes, the process control is not performed properly.



6. Large capacity cassette (LCC) adjustment

(1) Off-center adjustment

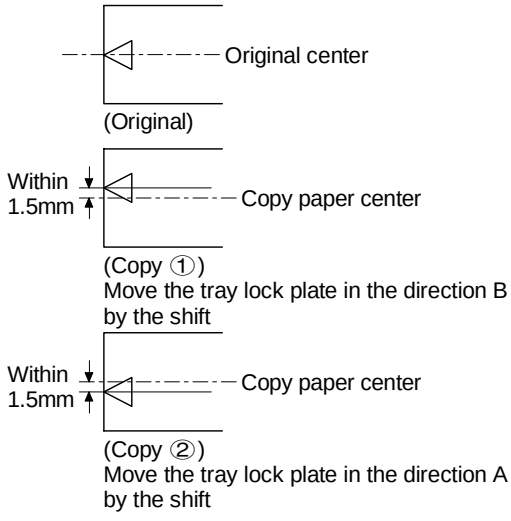
Make an original as shown below, and make a normal copy with the large capacity cassette. Move the tray lock plate in the arrow direction to adjust so that the shift of the copy center from the original center is within 1.5mm.



(Note) This adjustment must be performed without center shift on the lens of the copier. (Allowable center shift: 1.5m)

① Put the original on the original table, and make a normal copy with the large capacity cassette.

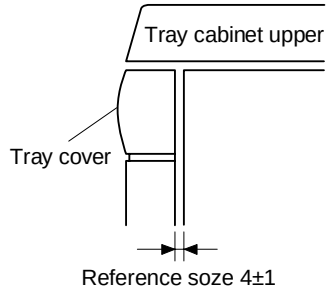
② Check the copy. Loosen two screws (a) of the tray lock plate, and move and adjust the tray lock plate in the arrow direction.

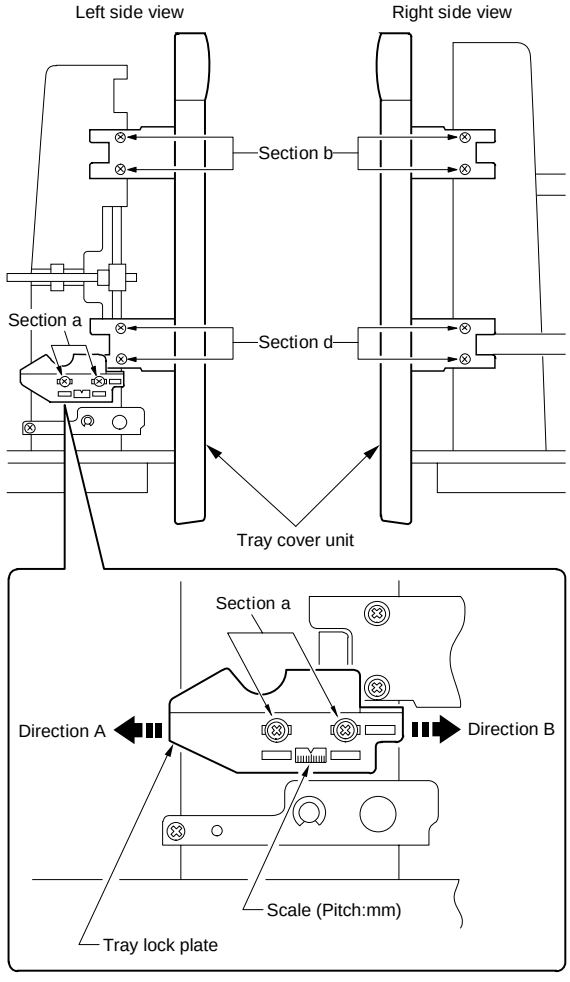

Original center
(Original)
Within 1.5mm
Copy paper center
(Copy ①)
Move the tray lock plate in the direction B by the shift
Within 1.5mm
Copy paper center
(Copy ②)
Move the tray lock plate in the direction A by the shift

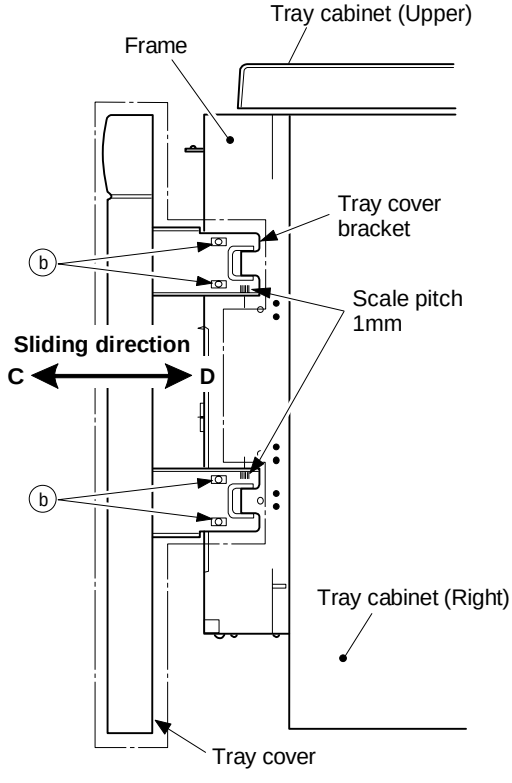
③ After completion of tray cover line alignment by the off-center adjustment and the off-center adjustment, loosen eight screws (b) which are fixing the tray cover. Slide the tray cover to adjust so that the clearance between the tray cover and the both side covers is 4 ±1mm.

(Reference) When the off-center adjustment is shifted toward B, the tray cover is slid in the direction of D.

[External view reference]







7. ADU unit

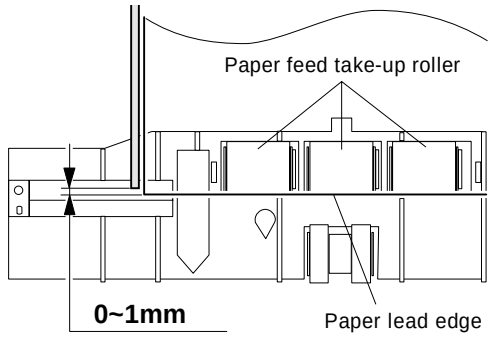
(1) Rear plate position check

① Execute simulation 52-1.
Check that the rear plate moves smoothly.

② After the rear plate stops, pull out the ADU unit from the copier and check that the rear plate is at the reference position.

Reference position: AB series — Check that the A4 size paper rear edge is in contact with the rear edge plate.
Inch series — Check that the letter size paper rear edge is in contact with the rear edge plate.

③ With the above state, check that the paper lead edge is 0 ~ 1mm from the take-up roller hole.

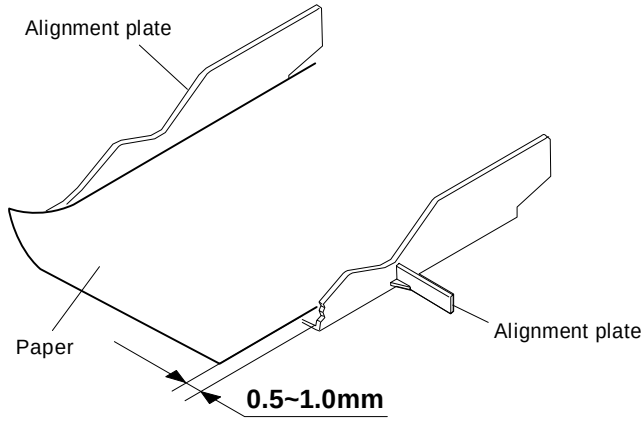


(2) Alignment plate position check

① Execute simulation 52-2.
Check that the alignment plate moves smoothly.

② After the alignment plate stops, pull out the ADU unit from the copier and check that the distance between alignment plates is +0.5mm to +1.0mm for the following paper sizes.

AB series — A4 size paper width
Inch series — Letter size paper width



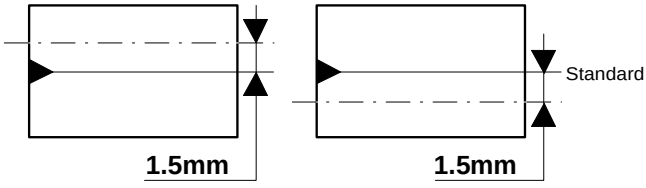
(3) Off-center adjustment

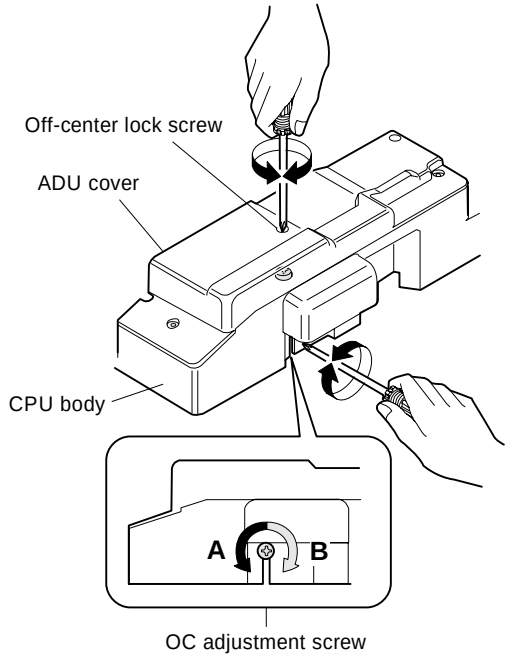
Make a duplex copy and adjust as follows:

① When the image is shifted from the original in direction of (a), loosen (rotate one or two turns) the off-center lock screw, turn and adjust the OC adjustment screw in the direction of A through the notch for the off-center adjustment, and tighten the off-center adjustment lock screw.

② When the image is shifted from the original in direction of (b), loosen (rotate one or two turns) the off-center lock screw, turn and adjust the OC adjustment screw in the direction of A through the notch for the off-center adjustment, and tighten the off-center adjustment lock screw.

※ This adjustment is performed after checking that the center shift on the copier lens is within the specified range.

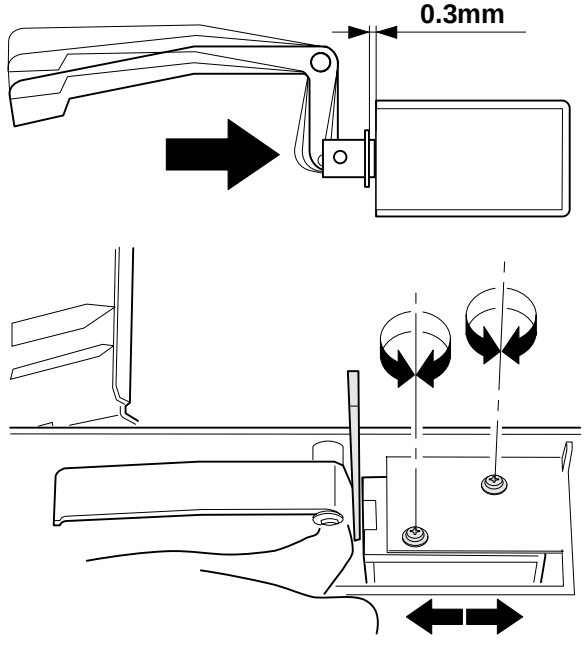




(4) Paper holding plate solenoid position adjustment

① Press the paper holding plate, and use a thickness gauge to check that the clearance between the paper holding plate solenoid and the paper holding plate solenoid rubber is 0.3mm.

② If the clearance is not 0.3mm, loosen the screw and slide the paper holding plate solenoid back and forth to adjust. (Put the thickness gauge of 0.3mm in the clearance, and adjust and tighten the screw.)

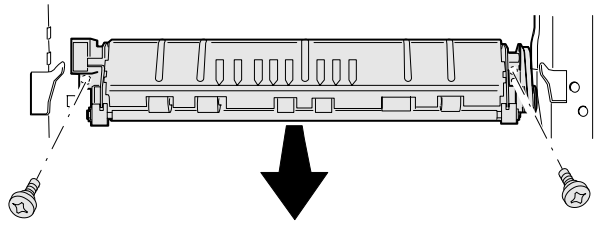


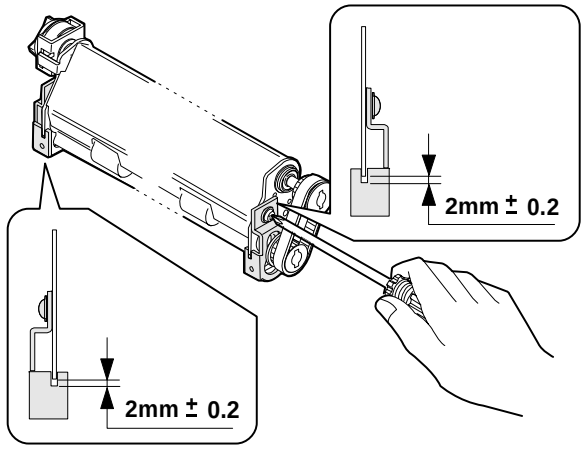
8. Curl correction unit adjustment

① Check that the clearance between the notch in the roller supporting plates in the front and the rear sides of the curl correction unit and the reverse frame is 2 ± 0.2 mm.

② If the clearance is not 2 ± 0.2 mm, loosen the screw and move the roller supporting plates back and forward to adjust so that the clearance is 2 ± 0.2 mm. (Adjust both the front side and the rear side).

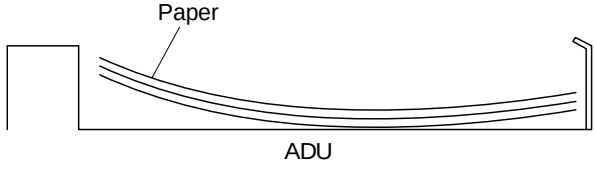
∗ The curl correction unit is fixed to the body with two screws.

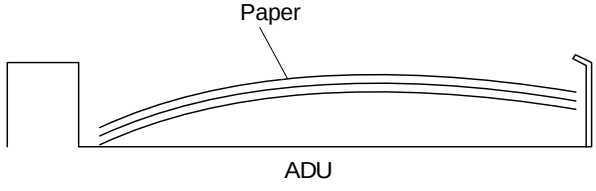




When a curl is generated by some conditions or paper states to cause wrinkles, adjust as follows:

- In the case of upward curl on the ADU, decrease the clearance by 0.2mm.
- In the case of downward curl on the ADU, increase the clearance by 0.2mm.





[9] SIMULATIONS

List of simulations

Main code	Sub code	Operation
1	01	Mirror scan operation
	02	Optical system sensor check
	03	Lens operation check
	04	Lens operation aging
	05	Lens lock position shift
2	01	RADF operation aging
	02	RADF sensor check
	03	RADF individual load check
3	01	(No program)
	02	Sorter sensor check
	03	Sorter individual load check
5	01	Lamp/LED all lighting
	02	Heater lamp check
	03	Copy lamp check
	04	DL/BL check
6	01	Transport system load operation (clutch/ solenoid)
	02	Fan motor operation
	03	Tray lift motor operation
7	01	Aging with jam
	02	Aging without jam
	03	Aging without jam, without fusing temperature control
	04	Warm-up saving
	05	Process operation check
	06	Intermittent operation aging (with jam)
	07	Intermittent operation aging (without jam)
08	01	Developing bias output
	02	Main charger output (ME/AE)
	03	Main charger output (Photo)
	04	Main charger output (Toner save)
	05	(No program)
	06	Transfer charger output
	07	Separation charger output
10	—	Toner motor ON
14	—	Trouble cancel (Excluding U2 trouble and tray trouble)
15	—	Tray trouble cancel
16	—	U2 trouble cancel
17	—	PF trouble cancel
20	—	Maintenance counter clear
21	01	Maintenance cycle setting
	02	(No program)
22	01	Counter display (Total/Maintenance/Developer/RADF/Staple/Tray)
	02	Jam counter display
	03	Error (trouble) counter display
	04	Key operation code display
	05	ROM version data display
24	01	Jam counter clear
	02	Error (trouble) counter clear
	03	Duplex counter clear
	04	RADF counter clear
	05	Staple counter clear
	06	Tray counter clear
	07	Film wear correction counter clear
25	01	Toner density sensor monitor
	02	Automatic developer adjustment
26	01	Option setting
	02	LCC paper size setting
	03	Auditor/coin vendor setting
	04	(No program)
	05	Counter mode setting

Main code	Sub code	Operation
26	06	Destination setting
	07	Drum sensitivity setting
	08	(No program)
	09 ~ 17	(No program)
27	01	PC/MODEM communication trouble (U7-00) detection YES/ NO setting
	02	PC/MODEM phone number setting
	03	PC/MODEM IC number setting
	04	Service start/end
	05	Tag number setting
30	01	Main body sensor check (Paper feed/Duplex/Fusing/ Waste toner)
	02	Tray sensor check
42		Developer counter clear
43	—	Fusing temperature control temperature setting
44	01	Process control inhibit/allow setting
	02	Drum marking sensor adjustment
	03	Process control sensor output adjustment
	04	Process control reference value registration
	05	(No program)
	06	(No program)
	07	Process ID/mark sensor LED light quantity check
	08	(No program)
	09	Process control data display
46	—	Exposure adjustment
47	—	AE sensor characteristics measurement AE sensor gain automatic adjustment)
48	01	Front-rear direction magnification ratio adjustment
	02	Paper transport direction magnification ratio adjustment (Mirror speed correction)
	03	Lens characteristics value input
	04	No. 4/5 mirror characteristics value input
	05	Mirror speed correction value input
50	01	Copy lead edge adjustment
	02	Lead edge adjustment (simple type)
	03	Lead edge adjustment value input
	04	Void adjustment value input
51	01	Separation pawl timing adjustment
	02	Resist amount adjustment
	04	TRC2H OFF timing setting
	05	Manual paper feed small size resist amount adjustment
	06	Manual paper feed small size resist amount adjustment value input
52	01	Intermediate tray alignment plate adjustment value setting
	02	Intermediate tray rear plate adjustment value setting
	03	(No program)
	04	
53	01	RADF stop position adjustment value (normal paper, single copy) setting
	02	RADF stop position adjustment value (normal paper, duplex copy) setting
	03	RADF stop position adjustment value (thin paper, single copy) setting
	04	RADF stop position adjustment value (thin paper, duplex copy) setting
	05	(No program)
	06	(No program)
	07	RADF resist sensor adjustment
	08	RADF timing sensor adjustment
	09	RADF paper exit sensor adjustment

Details of contents

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td>1</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.
SIMULATION NO.1
INPUT 1 ~ 5
1. OPTICAL SYSTEM SCAN.
2. OPTICAL SYSTEM SENSOR TEST.
3. LENS TEST,
4. LENS AGING TEST.
5. LENS LOCK POSITION SETTING.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>1</td><td>Mirror scan operation</td><td>When the sub code is entered, the RPL lights up to allow setting of the magnification ratio with the magnification ratio key. Set the magnification ratio and press the START key, and the mirror base and No.4/5 mirror/lens home positions will be sensed and mirror scanning will be performed at the set ratio.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>2</td><td>Optical system sensor check</td><td>When the sub code is entered, the LCD shows the following display to allow checking of the optical system sensors. (The display is highlighted when sensed.)
SIMULATION NO. 1-2
LHP , MBHP , RE , MHP , DC38V
<table><tr><th>Display</th><th>Name</th></tr><tr><td>LHP</td><td>Lens home position sensor</td></tr><tr><td>MBHP</td><td>No. 4/5 mirror home position sensor</td></tr><tr><td>RE</td><td>Mirror motor rotary encoder output</td></tr><tr><td>MHP</td><td>Mirror home position sensor</td></tr><tr><td>DC38V</td><td>DC 38Vfor mirror motor</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>3</td><td>Lens, No. 4/5 mirror operation check</td><td>When the sub code is entered, the mirror base, No. 4/5 mirror, and the lens home positions are sensed and No. 4/5 mirror moves one cycle of fixed magnification ratios.
(One cycle of fixed magnification ratios)
100% → 50 % → 70% → 81% → 86% → 200% → 141% → 122% → 115% → 100%</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>4</td><td>Lens, No. 4/5 mirror operation check/aging</td><td>When the sub code is entered, simulation 1-3 is repeated.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>5</td><td>Lens lock position shift</td><td>When the sub code is entered, the lens and No. 4/5 mirror are moved to the fixing screw position. (Used to move the copier body.)</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>2</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.
SIMULATION NO. 2
INPUT 1~3
1. RADF AGING TEST.
2. RADF SENSOR TEST.
3. RADF COMPONENT OPERATION TEST.</td><td></td><td></td><td></td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>1</td><td>RADF aging</td><td>When the sub code is entered, the LCD shows the following display. With the RPL on, enter the RADF operation code to be checked and press the START key, then the RADF will start aging operation without originals.

SIMULATION NO. 2-1
1.. 1→1 (1→2)
2.. 2→1 (2→2)</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>2</td><td>RADF sensor check</td><td>When the sub code is entered, the LCD shows the following display to allow checking of the RADF sensors.

SIMULATION NO. 2-2
DSD , DFD , DTD , RDD , AUOD
FGOD , TGOD , DED1 , DED2
DWD1 , DWD2 , DWD3 , DWD4
DLS1 , DLS2 , DWS

<table>
<tr><th>Display</th><th>Name</th><th>Display</th><th>Name</th></tr>
<tr><td>DSD</td><td>Original presence sensor</td><td>DED2</td><td>Empty sensor (Sensing the third B5 paper)</td></tr>
<tr><td>DFD</td><td>Original feed sensor</td><td>DWD1 (A3)</td><td rowspan="5">Original width sensor (Refer to the table below.)</td></tr>
<tr><td>DTD</td><td>Timing sensor</td><td>DWD2 (B4)</td></tr>
<tr><td>RDD</td><td>Paper reversing sensor</td><td>DWD3 (A4)</td></tr>
<tr><td>AUOD</td><td>ADF open/close sensor</td><td>DWD4 (B5)</td></tr>
<tr><td>FGOD</td><td>Paper feed section cover open/close switch</td><td>DLS1</td><td rowspan="2">Original length sensor (Refer to the table below.)</td></tr>
<tr><td>TGOD</td><td>Reversing section cover open/close switch</td><td>DLS2 (Inch series only)</td></tr>
<tr><td>DED1</td><td>Empty sensor (sensing the third paper)</td><td>DWS</td><td>Original width sensor (During feeding)</td></tr>
</table>
Highlighted display: Paper presence/Cover open
Normal display: Paper empty/Cover closed

[RADF original size sensing]

<table>
<tr><th rowspan="2">Destination</th><th rowspan="2">Original size</th><th colspan="4">Original width sense</th><th colspan="2">Original length sense</th></tr>
<tr><th>DWD1</th><th>DWD2</th><th>DWD3</th><th>DWD4</th><th>DLS1</th><th>DLS2</th></tr>
<tr><td rowspan="5">Inch series</td><td>11" × 17"</td><td>○</td><td>—</td><td>×</td><td>—</td><td>○</td><td>○</td></tr>
<tr><td>8.5" × 14"</td><td>×</td><td>—</td><td>○</td><td>—</td><td>○</td><td>○</td></tr>
<tr><td>8.5" × 11"R</td><td>×</td><td>—</td><td>○</td><td>—</td><td>○</td><td>×</td></tr>
<tr><td>8.5" × 11"</td><td>○</td><td>—</td><td>×</td><td>—</td><td>×</td><td>×</td></tr>
<tr><td>5.5" × 8.5"</td><td>×</td><td>—</td><td>×</td><td>—</td><td>×</td><td>×</td></tr>
<tr><td rowspan="8">AB series</td><td>A3</td><td>○</td><td>×</td><td>×</td><td>×</td><td>○</td><td>—</td></tr>
<tr><td>B4</td><td>×</td><td>○</td><td>×</td><td>×</td><td>○</td><td>—</td></tr>
<tr><td>A4R</td><td>×</td><td>×</td><td>○</td><td>×</td><td>○</td><td>—</td></tr>
<tr><td>B5R</td><td>×</td><td>×</td><td>×</td><td>○</td><td>○</td><td>—</td></tr>
<tr><td>A4</td><td>○</td><td>×</td><td>×</td><td>×</td><td>×</td><td>—</td></tr>
<tr><td>B5</td><td>×</td><td>○</td><td>×</td><td>×</td><td>×</td><td>—</td></tr>
<tr><td>A5</td><td>×</td><td>×</td><td>○</td><td>×</td><td>×</td><td>—</td></tr>
</table></td><td>—</td><td>—</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>3</td><td>RADF individual load check</td><td>When the sub code is entered, the LCD shows the following display. With the RPL on, enter the RADF load code to be checked, and the code will be displayed on the copy quantity display. Then press the START key to start checking.
SIMULATION NO. 2-3
1..DFM FORWARD.
2..DFM REVERSE.
3..DTM FORWARD.
4..DTM REVERSE.
5..DTC
6..DFSOL
7..DRSOL
8..SSOL
9..DTBC
<table><tr><th>Code</th><th>Display</th><th>Name</th></tr><tr><td>1</td><td>DEM FORWARD</td><td>Paper feed motor forward rotation</td></tr><tr><td>2</td><td>DEM REVERSE</td><td>Paper feed motor reverse rotation</td></tr><tr><td>3</td><td>DTM FORWARD</td><td>Transport belt motor forward rotation</td></tr><tr><td>4</td><td>DTM REVERSE</td><td>Transport belt motor reverse rotation</td></tr><tr><td>5</td><td>DTC</td><td>Transport belt clutch</td></tr><tr><td>6</td><td>DFSOL</td><td>Paper feed solenoid</td></tr><tr><td>7</td><td>DRSOL</td><td>Reverse solenoid</td></tr><tr><td>8</td><td>SSOL</td><td>Shutter solenoid</td></tr><tr><td>9</td><td>DTBC</td><td>Brake clutch</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>3</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.
SIMULATION NO. 3
INPUT 1~3
1. (NO PROGRAM)
2. SORTER SENSOR TEST.
3. SORTER COMPONENT OPERATION TEST.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>2</td><td>Sorter sensor check</td><td>When the sub code is entered, the LCD shows the following display to allow checking of the sorter sensor. (When sensed, the display is highlighted.)
[When the sorter is installed]
SIMULATION NO. 3-2
SORTER
SPID , SPOD , IULD , ILLD , IHPS
IPSS
SJOD , STCD , SBCD
[When the staple sorter is installed]
SIMULATION NO. 3-2
STAPLE SORTER
JSW , BHPS , LCHPS , SGHPS , SPID
SPPD , BPED
SCSW , SHPS , SCS , SSD , SED
SPE</td><td>—</td><td>—</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th colspan="2">Sorter (SF-S16)</th><th colspan="2">Staple sorter (SF-S53)</th></tr>
<tr><th>Display</th><th>name</th><th>Display</th><th>Name</th></tr>
<tr><td>SPID</td><td>Sorter paper entry sensor</td><td>JSW</td><td>Sorter set sensor</td></tr>
<tr><td>SPOD</td><td>Sorter paper exit sensor</td><td>BHPS</td><td>Indexer (pin) home position sensor</td></tr>
<tr><td>IULD</td><td>Indexer upper limit sensor</td><td>LCHPS</td><td>Indexer (pin) home position sensor</td></tr>
<tr><td>ILLD</td><td>Indexer lower limit sensor</td><td>SGHPS</td><td>Indexer (pin) home position sensor</td></tr>
<tr><td>IHPS</td><td>Indexer home position sensor</td><td>SPID</td><td>Paper entry sensor</td></tr>
<tr><td>IPSS</td><td>Indexer home position sensor</td><td>SPPD</td><td>Paper entry sensor</td></tr>
<tr><td>SJOD</td><td>Sorter joint sensor</td><td>BPED</td><td>Bin paper sensor</td></tr>
<tr><td>STCD</td><td>Sorter upper cabinet sensor</td><td>SCSW</td><td>Staple cover open/close sensor</td></tr>
<tr><td>SBCD</td><td>Sorter front cabinet sensor</td><td>SHPS</td><td>Staple operation home position sensor</td></tr>
<tr><td></td><td></td><td>SCS</td><td>Staple unit home position sensor</td></tr>
<tr><td></td><td></td><td>SSD</td><td>Staple unit position sensor</td></tr>
<tr><td></td><td></td><td>SED</td><td>Staple sensor</td></tr>
<tr><td></td><td></td><td>SPED</td><td>Staple position sensor</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td></td><td>3</td><td>Sorter individual load check</td><td>When the sub code is entered, the LCD shows the following display.
With the RPL on, enter the sorter load code to be checked, and the code will be displayed on the copy quantity display. Press the START key to start checking of the selected load.

[When the sorter is installed]
SIMULATION NO. 3-3
SORTER
1. MAIN MOTOR.
2..FAN MOTOR.
3..GATE SOLENOID.
4..INDEX MOTOR.

<table>
<tr><th>Code</th><th>Display</th><th>Content</th></tr>
<tr><td>1</td><td>MAIN MOTOR</td><td>Sorter main motor operation check</td></tr>
<tr><td>2</td><td>FAN MOTOR</td><td>Sorter fan motor operation check</td></tr>
<tr><td>3</td><td>GATE SOLENOID</td><td>Sorter gate solenolid</td></tr>
<tr><td>4</td><td>INDEX MOTOR</td><td>Sorter index motor</td></tr>
</table>
[When the staple sorter is installed]
SIMULATION NO. 3-3
SORTER
1. MAIN MOTOR.
2..PAPER PASS SOLENOID.
3..PAPER HOLD SOLENOID.
4..BINSHIFT MOTOR.
5..JOGGER MOTOR.
6..STAPLE MOTOR.</td><td>—</td><td>—</td><td>—</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			<table><tr><th>Code</th><th>Display</th><th>Content</th></tr><tr><td>1</td><td>MAIN MOTOR</td><td>Sorter main motor operation check</td></tr><tr><td>2</td><td>PAPER PASS SOLENOID</td><td>Paper pass solenoid operation check</td></tr><tr><td>3</td><td>PAPER HOLD SOLENOID</td><td>Paper pass solenoid operation check</td></tr><tr><td>4</td><td>BINSHIFT MOTOR</td><td>Bin shift motor operation check</td></tr><tr><td>5</td><td>JOGGER MOTOR</td><td>Jogger motor operation check</td></tr><tr><td>6</td><td>STAPLE MOTOR</td><td>Staple motor operation check</td></tr></table>			
5			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 5 INPUT 1~4 1. ALL LED/LCD ON. 2. HEATER LAMP TEST. 3. COPY LAMP TEST. 4. DL/BL TEST.	—	—	—
	1	LED/LCD all lighting	When the sub code is entered, the LCD shows the following display and all LED's on the operation panel, the RADF, and the staple sorter are lighted. SIMULATION NO. 5-1	—	—	—
	2	Heater lamp check	When the sub code is entered, the heater lamp turns on/off every 0.5 sec 10 times.	—	—	—
	3	Copy lamp check	When the sub code is entered, the machine enters to the manual exposure mode. When the START key is pressed, the copy lamp lights up for 20 sec. During the copy lamp ON, adjust the exposure adjust key to change the copy lamp exposure. The mode can be changed to the photo mode by pressing the exposure selection key.	—	—	—
	4	Discharge lamp/Blank lamp check	1. When the sub code is entered, the blank lamp LED's light up from the rear frame side to the front frame side one by one sequentially and all LED's keeps on for 1 sec. 2. The LED's goes off from the rear frame side to the front frame side one by one. 3. The above operations 1 and 2 are repeated once more. During this time, the discharge lamp keeps lighting.	—	—	—

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td>6</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.

SIMULATION NO. 6
INPUT 1~3

1. COPIER SOLENOID/CLUTCH OPERATION.
2. FAN MOTOR OPERATION TEST.
3. PAPER TRAY OPERATION TEST.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>1</td><td>Transport system load operation (clutch/solenoid)</td><td>When the sub code is entered, the LCD shows the following display. With the RPL on, enter the load code to be checked, and the code will be displayed on the copy quantity display. Then press the START key to start checking of the selected load.

SIMULATION NO. 6-1
SELECT COPIER SOLENOID / CLUTCH
1.PSPS 2.HRS 3.CURLRC 4.DGS
5.MPFS 6.CPFS1 7.CPFS 8.CPFS3
9.CPFS4 10.CPFC1 11.CPFC2 12.CPFC3
13.CPFC4 14.DPFC 15.TRC1 16.TRC2H
17.DPFWS 18.DTRC 19.PSBRK 20.LPFS
21.LPFC 22.TRC3 23.LPFRC 20.MSWRES

<table><tr><th>Code</th><th>Display</th><th>Name</th></tr><tr><td>1</td><td>PSPS</td><td>Separation solenoid</td></tr><tr><td>2</td><td>HRS</td><td>Fuser drive solenoid</td></tr><tr><td>3</td><td>CURLRC</td><td>Curl correction clutch</td></tr><tr><td>4</td><td>DGS</td><td>Reverse/paper exit select solenoid</td></tr><tr><td>5</td><td>MPFS</td><td>Manual paper feed solenoid</td></tr><tr><td>6</td><td>CPFS1</td><td>Tray 1 take-up roller solenoid</td></tr><tr><td>7</td><td>CPFS2</td><td>Tray 2take-up roller solenoid</td></tr><tr><td>8</td><td>CPFS3</td><td>Tray 3 take-up roller solenoid</td></tr><tr><td>9</td><td>CPFS4</td><td>Tray 4 take-up roller solenoid</td></tr><tr><td>10</td><td>CPFC1</td><td>Tray 1 paper feed roller solenoid</td></tr><tr><td>11</td><td>CPFC2</td><td>Tray 2 paper feed roller solenoid</td></tr><tr><td>12</td><td>CPFC3</td><td>Tray 3 paper feed roller solenoid</td></tr><tr><td>13</td><td>CPFC4</td><td>Tray 4 paper feed roller solenoid</td></tr><tr><td>14</td><td>DPFC</td><td>Intermediate tray paper feed roller clutch</td></tr><tr><td>15</td><td>TRC1</td><td>Paper transport roller clutch 1</td></tr><tr><td>16</td><td>TRC2H</td><td>Paper transport roller clutch 2 (for high speed)</td></tr><tr><td>17</td><td>DPFWS</td><td>Intermediate tray paper holding solenoid</td></tr><tr><td>18</td><td>DTRC</td><td>Intermediate tray paper transport clutch</td></tr><tr><td>19</td><td>PSBRK</td><td>Resist roller brake clutch</td></tr><tr><td>20</td><td>LPFS</td><td>LCC take-up roller solenoid</td></tr><tr><td>21</td><td>LPFC</td><td>LCC paper feed roller clutch</td></tr><tr><td>22</td><td>TRC3</td><td>Paper transport roller clutch 3</td></tr><tr><td>23</td><td>LPFRC</td><td>LCC reverse clutch</td></tr><tr><td>24</td><td>MSWRES</td><td>Main switch OFF solenoid</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>2</td><td>Fan motor operation</td><td>When the sub code is entered, the LCD shows the following display. With the RPL on, enter the code of the fan motor to be checked, and the code will be displayed on the copy quantity display. Press the START key to operate the fan motor.

SIMULATION NO. 6-2
SELECT FAN MOTOR
1. SFM 2. VFM 3. VFM1
4. VFM2 (24V) 5. VFM2 (10V) 6. CFM1
7. ALL ON

<table><tr><th>Code</th><th>Display</th><th>Name</th></tr><tr><td>1</td><td>SFM</td><td>Suction fan motor</td></tr><tr><td>2</td><td>VFM1</td><td>Heat ventilation fan motor 1</td></tr><tr><td>3</td><td>VFM2, 3</td><td>Heat ventilation fan motor 2, 3</td></tr><tr><td>4</td><td>CFM</td><td>Cooling fan motor</td></tr><tr><td>5</td><td>DVFM</td><td>DV fan motor</td></tr><tr><td>6</td><td>ALL ON</td><td>All fan motor operation</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>3</td><td>Tray lift motor operation</td><td>When the sub code is entered, the LCD shows the following display, and the tray performs lift-up operation. (It stops when the upper limit is sensed.)
At that time, the tray sensor can be checked. (When sensed, it is highlighted.)

SIMULATION NO. 6-3
MFT : MPED
CAS1 : PED1 , LUD1 , CSS11 , CSS12 , CSS13 , CSS14
CAS2 : PED2 , LUD2 , CSS21 , CSS22 , CSS23 , CSS24
CAS3 : PED3 , LUD3 , CSS31 , CSS32 , CSS33 , CSS34
CAS4 : PED4 , LUD4 , CSS41 , CSS42 , CSS43 , CSS44
LCC : TCD , TLD , TUD , TLMD , TPTD , TSW

<table><tr><th>Tray</th><th>Display</th><th>Name</th></tr><tr><td>Manual feed</td><td>MFED</td><td>Manual feed ray paper empty sensor</td></tr><tr><td rowspan="3">Tray 1 ~ 4
(n = 1 ~ 4)</td><td>PEDn</td><td>Paper empty sensor</td></tr><tr><td>LUDn</td><td>Upper limit sensor</td></tr><tr><td>CSSnm</td><td>Paper size sensor</td></tr><tr><td rowspan="7">LCC</td><td>TCD</td><td>LCC door open sensor</td></tr><tr><td>TLD</td><td>LCC lower limit sensor</td></tr><tr><td>TUD</td><td>LCC paper upper section sensor</td></tr><tr><td>TLMD</td><td>LCC paper upper limit sensor</td></tr><tr><td>TPTD</td><td>LCC PT sensor</td></tr><tr><td>TSW</td><td>LCC switch</td></tr></table>
n: 1-4
nm: 11- 14</td><td>—</td><td>—</td><td>—</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	

Sensor				Switch
CSSn4	CSSn3	CSSn2	CSSn1	
OFF	OFF	OFF	OFF	
OFF	OFF	OFF	ON	A3
OFF	OFF	ON	OFF	A4
OFF	OFF	ON	ON	8.5" x 11"
OFF	ON	OFF	OFF	B4
OFF	ON	OFF	ON	8.5" x 14"
OFF	ON	ON	OFF	11" x 17"
OFF	ON	ON	ON	5.5" x 8.5"
ON	OFF	OFF	OFF	B5
ON	OFF	OFF	ON	Ex
ON	OFF	ON	OFF	A5
ON	OFF	ON	ON	F4
ON	ON	OFF	OFF	A4R
ON	ON	OFF	ON	B5R
ON	ON	ON	OFF	8.5" x 11"R
ON	ON	ON	ON	Ex

7			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 7 INPUT 1~7 1. COPIER AGING TEST MODE. 2. COPIER AGING TEST, MISFEED DETECTION DISABLED. 3. COPIER AGING TEST, MISFEED DETECTION, WARM UP, TEMPERATURE CONTROL DISABLED. 4. WARM UP DISABLED. 5. PROCESS UNIT OPERATION TEST. 6. INTERVAL AGING MODE. 7. INTERVAL AGING MODE. (NO MISFEED DETECTION)			
	1	Aging with jam	When the sub code is entered, the machine starts warming up, and the warm-up time is displayed on the LCD. After completion of warming up, press the CA key. Perform setting in each mode, press the START key, and aging will be started. WARM UP TIME : mm : ss PLEASE WAIT.	—	—	—
	2	Aging without jam	When the sub code is entered, the machine starts warming up, and the warm-up time is displayed on the LCD. After completion of warming up, press the CA key. Perform setting in each mode, press the START key, and aging without paper will be started. In this case, paper jam is ignored. WARM UP TIME : mm : ss PLEASE WAIT.	—	—	—
	3	Aging without jam, without fusing temperature control	When the sub code is entered, aging is performed without warm-up and ignoring the heater system trouble and paper jam. (The heater lamp does not light up.)	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	4	Warm-up saving	When the sub code is entered, the machine operation can be checked without warm-up. If the heater section is at low temperature, the heater low temperature amy be detected and "H4" may be displayed.	—	—	—
	5	Process operation check	When the sub code is entered, all process operations are checked.	—	—	—
	6	Intermittent operation aging (with jam)	When the sub code is entered, the LCD shows the following display. With the RPL on, enter the value with the 10-key pad, and the set time will be displayed on the copy quantity display. Press the START key to start warming up. After completion of warming up, the RPL turns on and aging is performed under the standby state for the set time. SIMULATION NO. 7-6 INPUT INTERVAL TIME. (1~900SEC)	—	—	—
	7	Intermittent operation aging (without jam)	When the sub code is entered, the LCD shows the following display. With the RPL on, enter the value with the 10-key pad, and the set time will be displayed on the copy quantity display. Press the START key to start warming up. After completion of warming up, the RPL turns on and aging is performed under the standby state for the set time. In this case, paper jam is ignored. SIMULATION NO. 7-7 INPUT INTERVAL TIME. (1~900SEC)	—	—	—
8			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. (Except for SUK and Japan) SIMULATION NO. 8 INPUT 1~7 1. DEVELOPING BIAS VOLTAGE TEST. 2. MAIN HIGE VOLTAGE UNUT TEST. 3. MAIN HIGE VOLTAGE UNUT TEST. (PHOTO MODE) 4. MAIN HIGE VOLTAGE UNUT TEST. 5. (NO PROGRAM) 6. TRANSFER HIGE VOLTAGE UNUT TEST. 7. SEPARATION HIGE VOLTAGE UNUT TEST.			

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			(SUK) SIMULATION NO. 8 INPUT 1~7 1. DEVELOPING BIAS VOLTAGE TEST. 2. MAIN HIGE VOLTAGE UNUT TEST. 3. MAIN HIGE VOLTAGE UNUT TEST. (PHOTO MODE) 4. MAIN HIGE VOLTAGE UNUT TEST. (TSM) 5. (NO PROGRAM) 6. TRANSFER HIGE VOLTAGE UNUT TEST. 7. SEPARATION HIGE VOLTAGE UNUT TEST.			
	1	Developing bias output	When the sub code is entered, the BIAS (developing bias) output can be checked.	—	–200 ± 5V	P. 8 – 2
	2	Main charger output (ME/AE)	When the sub code is entered and the START key is pressed, the current value (Vgd) is displayed on the copy quantity display. Press the START key to check the main charger output. High voltage adjustment of the main charger (ME/AE) can be made with formula (2). The output adjustment value (Vgd) is about –251 to –950V for entering 161- 510 (with the 10-key pad). One step : about 2V Vg = –2.00 x Vgd + 71 ----- (2) Vg : Actual output voltage Vgd : Value (The above formula shows the ideal curve (approximate values), and differs from the actual high voltage output.)	385 (Vgd)	161 ~ 510 (Vgd) (–730 ± 5V)	P. 8 – 5
	3	Main charger output (Photo)	When the sub code is entered and the START key is pressed, the current value (Vgd) is displayed on the copy quantity display. Press the START key to check the main charger output. High voltage adjustment of the main charger (ME/AE) can be made with formula (2). The output adjustment value (Vgd) is about –251 to –950V for entering 161- 510 (with the 10-key pad). One step : about 2V Vg = –2.00 x Vgd + 71 ----- (2) Vg : Actual output voltage Vgd : Value (The above formula shows the ideal curve (approximate values), and differs from the actual high voltage output.)	265 (Vgd)	161 ~ 510 (Vgd) (–450 ± 5V)	P. 8 – 5
	4	Main charger output (Toner save)	When the sub code is entered and the START key is pressed, the current value (Vgd) is displayed on the copy quantity display. Press the START key to check the main charger output. High voltage adjustment of the main charger (ME/AE) can be made with formula (2). The output adjustment value (Vgd) is about –251 to –950V for entering 161- 510 (with the 10-key pad). One step: about 2V Vg = –2.00 x Vgd + 71 ----- (2) Vg : Actual output voltage Vgd : Value (The above formula shows the ideal curve (approximate values), and differs from the actual high voltage output.)	330 (Vgd)	161 ~ 510 (Vgd) (–625 ± 5V)	P. 8 – 5
	6	Transfer charger output	Enter the sub code and press the START key twice to check the transfer charger (TC) output.	—	—	P. 8 – 4
	7	Separation charger output	Enter the sub code and press the START key twice to check the separation charger (BC) output.	—	+280 ± 20V	P. 8 – 6

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
10		Toner motor ON	When the main code is entered, the LCD shows the following display. When "1" is selected and the START key is pressed, "1" is displayed on the copy quantity display and the toner motor is rotated with the LCD unchanged. When "2" is selected and the START key is pressed, the display returns to the initial display. If "2" is selected during toner motor operation by selecting "1," the toner motor is stopped and the display returns to the initial one. SIMULATION NO. 10 TONER MOTOR OPERATION. ARE YOU SURE ? 1. YES 2. NO	—	—	—
14		Trouble cancel (Excluding U2 trouble and tray trouble)	When the main code is entered, the troubles except for U2 and LCC trouble are cancelled, and the same operation as power ON is performed.	—	—	—
15		Tray trouble cancel	When the main code is entered, the LCD display shows the following display. When the START key is pressed under this state, LCC trouble is cancelled and the same operation as power ON is performed. SIMULATION NO. 15 LCC TROUBLE CODE :nn 00: NO TROUBLE 01: PT DISK TROUBLE 02: LCC UP TROUBLE 03: LCC DOWN TROUBLE nn: Trouble code	—	—	—
16		U2 trouble cancel	When the main code is entered, U2 trouble is cancelled and the same operation as power ON is performed.	—	—	—
17		PF trouble cancel	When the main code is entered, PF trouble is cancelled and the same operation as power ON is performed.	—	—	—
20		Maintenance counter clear	When the main code is entered, the LCD shows the following display. When "1" is selected and the START key is pressed, the maintenance counter is cleared and the display returns to the previous display. When "2" is selected and the START key is pressed, the maintenance counter is not cleared and the display returns to the previous display. SIMULATION NO. 20 MAINTENANCE COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO	—	—	—
21			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 21 INPUT 1~2 1. MAINTENANCE CYCLE SETTING. 2. (NO PROGRAM)			

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>1</td><td>Maintenance cycle setting</td><td>When the sub code is entered, the LCD shows the following display and the current maintenance cycle set value is displayed on the copy quantity display. With the RPL on, select the desired set value with the 10-key and press the START key, and the maintenance cycle will be stored.

SIMULATION NO. 21-1
SELECT MAINTENANCE CYCLE (0~6)
0. 100K 1. 200K
2. 50K 3. 20K 4. 10K 5. 5K
6. NONE

If the maintenance cycle is set to "0 ~ 5," when the copy quantity count reaches the set value, the following message is displayed to show that the maintenance is required.

READY TO COPY.
MAINTENNANCE REQUIRED : C
(MAINTENNANCE CODE)

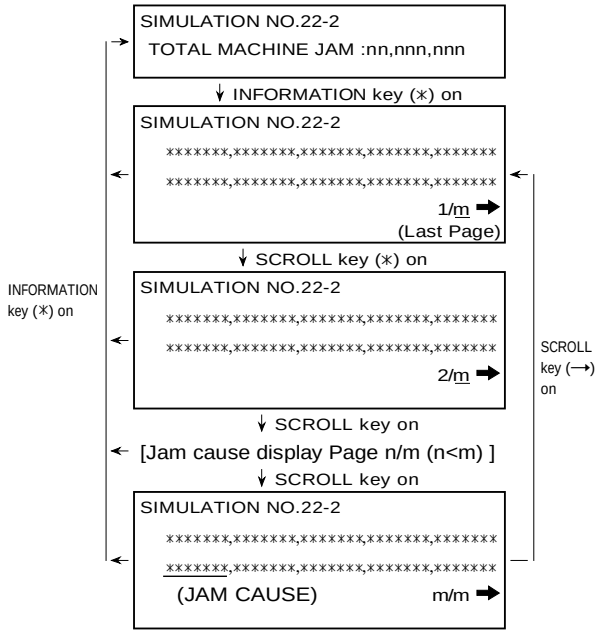
When the maintenance cycle is set to "6," the maintenance cycle is not set.
The relationship between the maintenance code (double underlined) in the above message and the simulation set values is shown in the table below.

<table><tr><th>Sim 21-1 set value</th><th>Maintenance cycle</th><th>Maintenance code</th></tr><tr><td>0</td><td>100K</td><td>A</td></tr><tr><td>1</td><td>200K</td><td>B</td></tr><tr><td>2</td><td>50K</td><td>C</td></tr><tr><td>3</td><td>20K</td><td>D</td></tr><tr><td>4</td><td>10K</td><td>E</td></tr><tr><td>5</td><td>5K</td><td>F</td></tr><tr><td>6</td><td>none</td><td>—</td></tr></table></td><td>0</td><td>0 ~ 6</td><td>—</td></tr>
<tr><td>22</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.

SIMULATION NO. 22
INPUT 1~5
1. COUNTER DATA DISPLAY.
2. JAM COUNTER DATA DISPLAY.
3. ERROR COUNTER DATA DISPLAY.
4. KEY OPERATOR CODE DISPLAY.
5. ROM VERSION DATA DISPLAY.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>1</td><td>Counter display</td><td>When the sub code is entered, the LCD shows "Page 1" as shown below. In this case, when the scroll (→) key is pressed, the LCD shows "Page 2." Pressing the scroll key shows "Page 1" and "Page 2" alternately.</td><td>—</td><td>—</td><td>—</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			Page. 1 SIMULATION NO. 22-1 TOTAL : nn, nnn, nnn MAINTENANCE : nn, nnn, nnn COPIES : nn, nnn, nnn DEVELOPER : nn, nnn, nnn RADF : nn, nnn, nnn STAPLER : nn, nnn, nnn 1/2 → ↓ SCROLL KEY on ↑ Page 2 SIMULATION NO. 22-1 BYPASS : nn, nnn, nnn CASSETTE 1 : nn, nnn, nnn CASSETTE 2 : nn, nnn, nnn CASSETTE 3 : nn, nnn, nnn CASSETTE 4 : nn, nnn, nnn LCC : nn, nnn, nnn DUPLEX : nn, nnn, nnn 1/2 → nn, nnn, nnn: Counter value			
	2	Jam counter display	When the sub code is entered, the LCD shows the following display to allow selection of the jam counter display. SIMULATION NO. 22-2 SELECT JAM COUNTER. (1~2) 1. MACHINE 2. RADF 1. Machine jam counter When "1" is selected in the above message and the START key is pressed, the machine total jam count is displayed on the LCD. When, with the machine total jam count displayed, the information (✱) key is pressed, the LCD shows the jam cause display, where the latest 10 jam causes (max. 20 pages) are displayed in the order from the latest. To change the page of the jam cause display, press the scroll (→) key. When the information key is pressed with the jam cause display displayed, the LCD returns to the machine total jam count display.	—	—	—

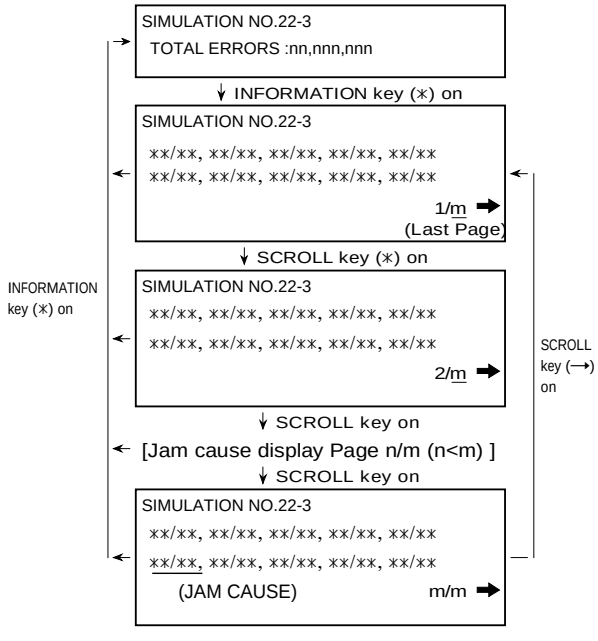
Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	

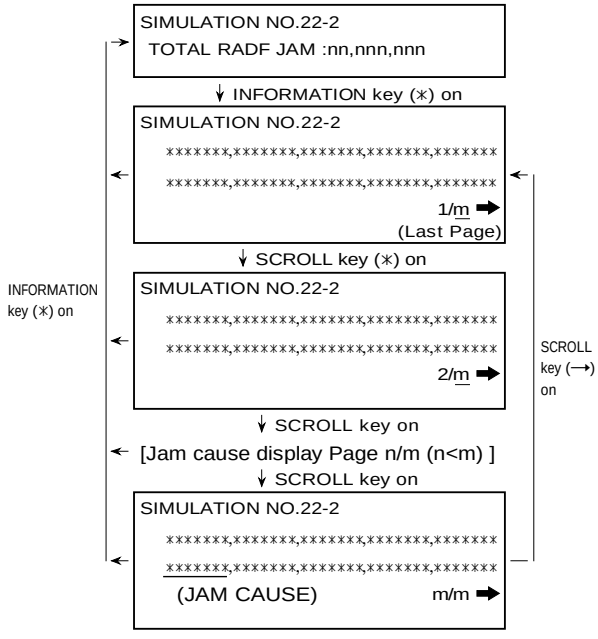


2. RADF jam counter

When "2" (RADF) is selected in the jam counter selection display and the START key is pressed, the LCD shows the RADF total jam count. With the RADF total jam count displayed, when the information key is pressed, the LCD shows the jam cause display, where the latest 10 jam causes (x max. 20 pages) are displayed in the order from the latest. To change the page of the jam cause display, press the scroll (→) key.

When the information key is pressed with the jam cause display displayed, the LCD returns to the RADF total jam count display.



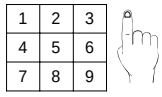
Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	3	Error (trouble) counter display	When the sub code is entered, the LCD shows the trouble count. With the trouble count displayed, when the information (*) key is pressed, the LCD shows the trouble code display, where the latest 10 trouble codes (x max. 10 pages) are displayed in the order from the latest. To change the page of the trouble code display, press the scroll (→) key. When the information key is pressed with the trouble code display displayed, the LCD returns to the trouble count display. 	—	—	—
	4	Key operation code display	When the sub code is entered, the LCD shows the following display and the key operator code is displayed. SIMULATION NO. 22-4 KEY OPERATOR CODE : nnnnn nnnnn: Key operator code (00000 ~ 99999)	—	—	—
	5	ROM version data display	When the sub code is entered, the LCD shows the following display and the ROM version is displayed. SIMULATION NO. 22-5 MAIN : Vnnnn MIRROR : Vnnnn OPE : Vnnnn SORTER : Vnnnn DATA : Vnnnn(ccc) RADF : Vnnnn nnnn: ROM version data ccc: language ENG ENGLISH JPN JAPAN GER GERMAN FRN FRENCH DUT DUTCH SPN SPANISH ITA ITALIAN	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
24			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 24 INPUT 1~7 1. JAM COUNTER DATA CLEAR. 2. ERROR(TROUBLE) COUNTER DATA CLEAR. 3. DUPLEX COUNTER CLEAR. 4. RADF COUNTER DATA CLEAR. 5. STAPLE COUNTER CLEAR. 6. TRAY COUNTER CLEAR. 7. MEMBRANCE DECREASE ADJUSTMENT CLEAR.			
	1	Jam counter clear	When the sub code is entered, the LCD shows the jam counter to be cleared. SIMULATION NO. 24-1 JAM COUNTER CLEAR. 1. MACHINE 2. RADF 3. BOTH ∗ BOTH: Both of MACHINE and RADF. 1. MACHINE JAM COUNTER CLEAR When "1. MACHINE" is selected in the jam counter selection screen and the START key is pressed, the LCD shows the following display. When "1. YES" is selected in the display and the START key is pressed, the machine jam counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24. SIMULATION NO. 24-1 MACHINE JAM COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO 2. RADF JAM COUNTER CLEAR When "2. RADF" is selected in the jam counter selection screen and the START key is pressed, the LCD shows the following display. When "1. YES" is selected in the display and the START key is pressed, the RADF jam counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the RADF counter is not cleared and the LCD returns to the sub code input screen of Sim. 24. SIMULATION NO. 24-1 RADF JAM COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			3. MACHINE/RADF JAM COUNTER CLEAR When "3. BOTH" is selected in the jam counter selection screen and the START key is pressed, the LCD shows the following display. When "1. YES" is selected in the display and the START key is pressed, the machine and the RADF jam counters are cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counters are not cleared and the LCD returns to the sub code input screen of Sim. 24. SIMULATION NO. 24-1 MACHINE/RADF JAM COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO			
	2	Error (trouble) counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the error (trouble) counter. SIMULATION NO. 24-2 ERROR COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the error (trouble) counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—
	3	Duplex counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the duplex counter. SIMULATION NO. 24-3 DUPLEX COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the duplex counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—
	4	RADF counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the RADF counter. SIMULATION NO. 24-4 RADF COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the RADF counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	5	Staple counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the staple counter. SIMULATION NO. 24-5 STAPLE COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the staple counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—
	6	Tray counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the tray counter. SIMULATION NO. 24-6 TRAY COUNTER CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the tray counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—
	7	Film wear correction counter clear	When the sub code is entered, the LCD shows the following display to allow clearing of the film wear correction counter. SIMULATION NO. 24-7 MEMBRANCE DECREASE ADJUSTMENT CLEAR. ARE YOU SURE ? 1. YES 2. NO When "1. YES" is selected in the display and the START key is pressed, the film wear correction counter is cleared and the LCD returns to the sub code input screen of Sim 24. When "2. NO" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the sub code input screen of Sim. 24.	—	—	—
25			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 25 INPUT 1~7 1. TONER DENSITY SENSOR MONITOR 2. AUTOMATIC TONER CONCENTRATION ADJUSTMENT/DV STIR			
	1	Toner density sensor monitor	When the sub code is entered, the drum motor rotates for 3 minutes to allow checking of the drum motor operation. In this case, the toner density sensor output value is displayed on the copy quantity display to allow monitoring it.	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	2	Automatic developer adjustment	When the sub code is entered, the drum motor rotates for 3 minutes to stir the developing unit and monitor the toner density sensor value 16 times. Then the average value is stored as the adjustment value. During rotation of the drum motor, the toner density sensor output value is displayed on the LCD. When an abnormal input of the sensor value occurs, it is judged as "EU" (Under toner) or "EL" (Over toner) trouble and the adjustment value is not stored.	128	78 ~ 179	P. 6 – 9
26			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. [Destination setting: SEC/SECL] SIMULATION NO. 26 INPUT 1~7 1. OPTION SETUP. 2. (NO PROGRAM) 3. AUDITOR COIN VENDOR SETUP. 4. (NO PROGRAM) 5. COUNTER MODE SETUP. 6. DESTINATION SETUP. 7. DRUM SENSITIVITY SETUP. 8. LCC EMPTY DATA SETUP. [Destination setting: Others SEC/SECL/JAPAN] SIMULATION NO. 26 INPUT 1~7 1. OPTION SETUP. 2. LCC SETUP. 3. AUDITOR COIN VENDOR SETUP. 4. (NO PROGRAM) 5. COUNTER MODE SETUP. 6. DESTINATION SETUP. 7. DRUM SENSITIVITY SETUP. 8. LCC EMPTY DATA SETUP.			
	1	Option setting	When the sub code is entered, the LCD shows the following display and the current set value is displayed on the copy quantity display. With the RPL on, select the code according to the sorter installation state and press the START key. Then the option setting is stored. SIMULATION NO. 26-1 SORTER/STAPLE SORTER SETTING? 1. YES 2. NO SIMULATION NO. 26-1 OPTION SETUP. CODE : RADF SORTER/STAPLE SORTER 1 : ○ ○ 2 : ○ × 3 : × ○ 4 : × × ○: SETTING ×: NO SETTING PLEASE SELECT BY 10-KEY PAD.	2	1 ~ 4	P. 6 – 9

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>2</td><td>LCC paper size setting (Except for SEC and SECL)</td><td>When the sub code is entered, the LCD shows the following display and the currently set value (paper size) is displayed on the copy quantity display.
With the RPL on, select the code according to the installed LCC and press the START key. Then the paper size in the LCC is stored.
SIMULATION NO. 26-2
SELECT LCC TYPE.
0. NO LCC
1. 8.5″×11″ (216×279)
2. A4
3. B5</td><td>0</td><td>0 ~ 3</td><td>P. 6 – 9</td></tr>
<tr><td></td><td>3</td><td>Auditor/coin vendor setting</td><td>When the sub code is entered, the LCD shows the following display and the currently set value is displayed on the copy quantity display.
With the RPL on, select the code according to the installation state of the auditor/coin vendor and press the START key. Then the setting is stored.
SIMULATION NO. 26-3
INPUT 1~4
1.P10
2.SF-EA11/12
3.COIN VENDOR
4.OTHER
<table><tr><th>Code</th><th>Display</th><th>Content</th></tr><tr><td>1</td><td>P10</td><td>Internal auditor. When dept. control is not performed (default).</td></tr><tr><td>2</td><td>SF-EA11/12</td><td>When the external auditor SF-EA11/12 is used.</td></tr><tr><td>3</td><td>COIN VENDOR</td><td>When the coin vendor is connected.</td></tr><tr><td>4</td><td>OTHER</td><td>When other dept. control device is used.</td></tr></table></td><td>—</td><td>1 ~ 4</td><td>—</td></tr>
<tr><td></td><td>5</td><td>Counter mode setting</td><td>When the sub code is entered, the LCD shows the following display and the code of the currently set counter mode is displayed on the copy quantity display.
With the RPL on, select the code and press the START key. Then the setting is stored.
SIMULATION NO. 26-5
COUNTER MODE SETUP
CODE TOTAL COUNT MAINTE COUNT
0 DOUBLE COUNT DOUBLE COUNT
1 SINGLE COUNT DOUBLE COUNT
2 DOUBLE COUNT SINGLE COUNT
3 SINGLE COUNT SINGLE COUNT
PLEASE SELECT BY
10-KEY PAD.
  </td><td>—</td><td>0 ~ 4</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>6</td><td>Destination setting</td><td>When the sub code is entered, the LCD shows the following display and the currently set value is displayed on the copy quantity display.
With the RPL on, select the code and press the START key. Then the setting is stored. In this case, the option setting is as shown in Tab. 26-6.
For SEC, the factory setting is "0. SEC (ES)."

SIMULATION NO. 26-6
[INCH]
0.SEC(ES) 1.SEC 2.SECL 3.OTHER
[AB (B5)]
4.JAPAN 5.OTHER
[AB (A5)]
6.SEEG 7.SUK 8.SCA 9.OTHER

PLEASE SELECT DESTINATION BY 10-KEY PAD.
1 2 3
4 5 6
7 8 9

[Tab. 26-6]
<table><tr><th>No.</th><th>Destination</th><th>No. of trays</th><th>LCC</th><th>RADF</th><th>Original sensor unit</th><th>Sorter</th><th>Toner save mode</th><th>P21</th></tr><tr><td>0</td><td>SEC (ES)</td><td>3</td><td>○(LT)</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>SHUT OFF</td></tr><tr><td>1</td><td>SEC</td><td>3</td><td>○(LT)</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr><tr><td>2</td><td>SECL</td><td>3</td><td>○(LT)</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr><tr><td>3</td><td>Inch, others</td><td>3</td><td>●(LT)</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr><tr><td>6</td><td>SEEG</td><td>3</td><td>△</td><td>△</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr><tr><td>7</td><td>SUK</td><td>3</td><td>△</td><td>△</td><td>×</td><td>△</td><td>Impossible to set</td><td>Power seve</td></tr><tr><td>8</td><td>SCA</td><td>3</td><td>△</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr><tr><td>9</td><td>A5, others</td><td>3</td><td>△</td><td>●</td><td>×</td><td>△</td><td>P22</td><td>Power seve</td></tr></table>○: Standard installation
×: Cannot be installed.
●: When setting the destination, installed. (Changeable)
△: When setting the destination, not installed. (Changeable)</td><td>—</td><td>1 ~ 9</td><td>P. 6 – 9</td></tr>
<tr><td></td><td>7</td><td></td><td>Drum sensitivity setting
When the sub code is entered, the LCD shows the following display and the code of the currently set value is displayed on the copy quantity display.
With the RPL on, select the code and press the START key. Then the setting is stored to allow control of the copy lamp according to the drum sensitivity.

SIMULATION NO. 26-7
DRUM SENSITIVITY SETUP.
INPUT 1~3.

Contents of set values
<table><tr><th>Set value</th><th>Content</th></tr><tr><td>1</td><td>Current copy lamp voltage + 1 [V]</td></tr><tr><td>2</td><td>Current copy lamp voltage</td></tr><tr><td>3</td><td>Current copy lamp voltage ~ 1 [V]</td></tr></table></td><td>2</td><td>1 ~ 3</td><td>P. 8 – 20</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
27			When main code 27"" is entered, the following LCD screen is displayed. SIMULATION NO.27 INPUT 1-5 1.DISABLING OF U7-00 TROUBLE 2.PC/MODEM DATA CHANGE.:TEL # 3.PC/MODEM DATA CHANGE.:ID # 4.SERVICE START/END REPORT. 5.TAG NUMBER SETTING.			
	01		During execution, the following message is displayed on the basic screen, allowing setting of communication trouble (U7-00). SIMULATION NO.27-1 DISABLING OF U7-00 TROUBLE 0. YES 1. NO When "0" is selected, the machine is not stopped even when PC/MODEM communication trouble occurs. When "1" is selected, the machine is stopped when PC/MODEm communication trouble occurs.	—	—	—
	02		During execution, the following message is displayed on the basic screen, allowing setting of the host computer telephone number. Use the 10 key pad to enter the host computer telephone number. SIMULATION NO.27-2 SELECT HOST NUMBER TO CHANGE DATA. 1.HOST1 2.HOST2 3.HOST3 4.HOST4 (When "1" is selected;) The following message is displayed in the basic screen. SIMULATION NO.27-2 SELECT TEL TO CHANGE DATA. [HOST1] 1.TEL1 2.TEL2 3.TEL3 4.TEL4 Use the 10 key to set the telephone number. When "1" is pressed, for example, the following message (A) message (B) are displayed. SIMULATION NO.27-2 HOST1 TEL1:••••••• (A) SIMULATION NO.27-2 HOST1 TEL1: ✳✳✳✳✳✳(1)✳✳✳✳✳✳ ← 24 digits – – – CHANGE DATA: 1. YES 2. NO ••••••• (B) (Note) (1) ••••••• Registered telephone number When "1.YES" is selected with message (B) displayed, the following message is displayed to allow entering a new telephone number. SIMULATION NO.27-2 HOST1 TEL1: ✳:[✳];#:[→];, ; [P] NEW DATA :✳✳✳✳✳✳✳(2)✳✳✳✳✳ ← 24 digits (Note) (2) ••••••• Telephone number to be newly registered. After completion of input, communication with the Modem is effective, and when the PRINT switch is pressed, the following message is displayed, allowing checking of the registered telephone number. SIMULATION NO.27-2 HOST✳TEL1:✳✳✳✳✳✳✳(2)✳✳✳✳✳ ← (24 digits) (When 2, 3, or 4 is selected:) Telephone number can be set similarly to 1.	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
27	03		During execution, the following message is displayed on the basic screen. SIMULATION NO.27-3 SELECT NUMBER TO CHANGE DATA. 1. PPC ID 2. PC/MODEM ID (When "1" is selected:) The following message (A) and (B) are displayed in the basic screen. SIMULATION NO.27-3 PPC ID:X:[✳],Y:[→] ••••••• (A) SIMULATION NO.27-3 PPC ID:X:[✳],Y:[→] ••••••• (B) ✳✳✳✳✳(2)✳✳✳✳✳ → ••••••• (3) ••••••• (Note) "✳✳✳✳✳(2)✳✳✳✳✳": Previously registered telephone number When message (B) is displayed, "PPC ID" can be set with 10 key pad, and the set ID number is displayed in "•••••••(3)•••••••" (Max. 10 digits). Then communication with the modem is effective. When the start key is pressed, the new telephone number is registered and the following massage is displayed. SIMULATION NO.27-3 PPC ID#: ••••••• (3) ••••••• (When "2" is selected:) PPC/MODEM ID can be set similarly to 1.			
	04		During execution, the following message is displayed on the basic screen, allowing setting of service start/end. SIMULATION NO.27-4 1. SERVICE START. 2. SERVICE END. (Service start) When "1" is selected, the following message is displayed, and the PPC sends "SERVICE START" command to th PC/MODEM. SIMULATION NO.27-4 SERVICE START. When the PC/MODEM receives the command normally, the following message is displayed. SIMULATION NO.27-4 SERVICE START Complete... (Service end) When "2" is selected, the following message is displayed, and the PPC sends "SERVICE END" command to the PC/MODEM. SIMULATION NO.27-4 SERVICE END When the PPC receives the command normally, the following message is displayed. SIMULATION NO.27-4 SERVICE END. Complete...	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
27	05		During execution, the following message is displayed. SIMULATION NO.27-5 PRESENT TAG: ******** NEW TAG : Then a tag number (8 digits) can be entered with 10 key pad. After entering, press the print switch, and the following message will be displayed, allowing tag number setting and checking. SIMULATION NO.27-5 TAG: ********			
30			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 30 INPUT 1~2 1. MAIN FRAME SENSOR TEST. 2. TRAY SENSOR TEST			
	1	Main body sensor check (Paper feed/Duplex/Fusing/ Waste toner)	When the sub code is entered, the LCD shows the following display to allow checking of the machine sensors. (When sensed, it is highlighted.) SIMULATION NO. 30-1 PFD1 , PFD2 , PFD3 , PFD4 , DPFD PPD1 , PPD2 , PPD3 , PSD , POD DPID1 , DPID2 DPPD1 , DPPD2 , DPPD3 DPUND , DTPD , DTWHPS , DTBHPS , TBBOX TNF , TNCTR , TES , DVCH , DSW DSWE , PFDL1 , PFDL2	—	—	—

Code	Name	Code	Name
PFD1	Paper feed sensor 1	DPUND	ADU installation sensor
PFD2	Paper feed sensor 2	DTPD	ADU paper sensor
PFD3	Paper feed sensor 3	DTWHPS	ADU width guide home sensor
PFD4	Paper feed sensor 4	DTBHPS	ADU rear edge guide home sensor
DPFD	ADU paper feed sensor	TBBOX	Waste toner bottle sensor
PPD1	Paper transport sensor 1	TNF	Waste toner bottle full sensor
PPD2	Paper transport sensor 2	TNCR	Toner cartridge switch
PPD3	Paper transport sensor 3	TES	Toner empty sensor
PSD	Paper transport sensor 4	DVCH	Developing unit sensor
POD	Paper exit sensor 1	DSW	Door switch
DPID1	ADU paper entry sensor 1	DSWE	Paper exit side door switch
DPID2	ADU paper entry sensor 2	PFDL1	LCC paper feed sensor 1
DPPD1	ADU paper transport sensor 1	(PFDL2)	LCC paper feed sensor 2
DPPD2	ADU paper transport sensor 2	DPPD3	ADU paper transport sensor 3

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td></td><td>2</td><td>Tray sensor check</td><td>When the sub code is entered, the LCD shows the following display
to allow checking of the machine sensors. (When sensed, it is highlighted.)
SIMULATION NO. 30-2
MFT : MPED ,
CAS1 : PED1 , LUD1 , CSS11 , CSS12 , CSS13 , CSS14
CAS2 : PED2 , LUD2 , CSS21 , CSS22 , CSS23 , CSS24
CAS3 : PED3 , LUD3 , CSS31 , CSS33 , CSS33 , CSS34
CAS4 : PED4 , LUD4 , CSS41 , CSS43 , CSS43 , CSS44
LCC : TCD , TLD , TUD , TLMD , TPTD , TSW
<table><tr><th>Tray</th><th>Display</th><th>Name</th></tr><tr><td>Manual feed</td><td>MFED</td><td>Manual feed tray paper empty sensor</td></tr><tr><td rowspan="3">Tray 1 ~ 4 (n = 1 ~ 4)</td><td>PEDn</td><td>Paper empty sensor</td></tr><tr><td>LUDn</td><td>Upper limit sensor</td></tr><tr><td>CSSnm</td><td>Paper size sensor</td></tr><tr><td rowspan="6">LCC</td><td>TCD</td><td>LCC door open sensor</td></tr><tr><td>TLD</td><td>LCC lower limit sensor</td></tr><tr><td>TUD</td><td>LCC upper limit sensor</td></tr><tr><td>TLMD</td><td>LCC limit sensor</td></tr><tr><td>TPTD</td><td>LCC PT sensor</td></tr><tr><td>TSW</td><td>LCC switch</td></tr></table>
<table><tr><th rowspan="2">Destination</th><th rowspan="2">Original size</th><th colspan="4">Original width sense</th><th colspan="2">Original length sense</th></tr><tr><th>DWD1</th><th>DWD2</th><th>DWD3</th><th>DWD4</th><th>DLS1</th><th>DLS2</th></tr><tr><td rowspan="5">Inch series</td><td>11" × 17"</td><td>○</td><td>—</td><td>×</td><td>—</td><td>○</td><td>○</td></tr><tr><td>8.5" × 14"</td><td>×</td><td>—</td><td>○</td><td>—</td><td>○</td><td>○</td></tr><tr><td>8.5" × 11"R</td><td>×</td><td>—</td><td>○</td><td>—</td><td>○</td><td>×</td></tr><tr><td>8.5" × 11"</td><td>○</td><td>—</td><td>×</td><td>—</td><td>×</td><td>×</td></tr><tr><td>5.5" × 8.5"</td><td>×</td><td>—</td><td>×</td><td>—</td><td>×</td><td>×</td></tr><tr><td rowspan="8">AB series</td><td>A3</td><td>○</td><td>×</td><td>×</td><td>×</td><td>○</td><td>—</td></tr><tr><td>B4</td><td>×</td><td>○</td><td>×</td><td>×</td><td>○</td><td>—</td></tr><tr><td>A4R</td><td>×</td><td>×</td><td>○</td><td>×</td><td>○</td><td>—</td></tr><tr><td>B5R</td><td>×</td><td>×</td><td>×</td><td>○</td><td>○</td><td>—</td></tr><tr><td>A4</td><td>○</td><td>×</td><td>×</td><td>×</td><td>×</td><td>—</td></tr><tr><td>B5</td><td>×</td><td>○</td><td>×</td><td>×</td><td>×</td><td>—</td></tr><tr><td>A5</td><td>×</td><td>×</td><td>○</td><td>×</td><td>×</td><td>—</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>42</td><td></td><td>Developer counter clear</td><td>When the main code is entered, the LCD shows the following display to allow clearing of the developer counter.
SIMULATION NO. 42
DEVELOPER COUNTER CLEAR.
ARE YOU SURE ?
1. YES 2. NO
When "1" is selected and the START key is pressed, the developer counter is cleared and the LCD returns to the simulation main code input screen.
When "2" is selected and the START key is pressed, the counter is not cleared and the LCD returns to the simulation main code input screen.</td><td>—</td><td>—</td><td>—</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
43			When the main code number "43" is entered, the LCD shows the stand-by and single copy fusing temperature adjustment level setting screen and the RPL lights up. The current set value is displayed on the copy quantity display. Enter the desired set value and press the PRINT switch to store it. When the scroll key is pressed with the screen displayed, the duplex copy fusing temperature level setting screen is shown, and the set value is displayed on the coy quantity display. Enter the desired set value similarly. Stand-by and single copy fusing temperature adjustment level setting screen	Single mode 3 Double mode Japan: 7 EX : 3	—	—
		Fusing temperature control temperature setting	SIMULATION NO. 43 **[1→1, 2→1]** INPUT (1~5) 1. 190℃ 2. 195℃ **3. 200℃** 4. 205℃ 5. 210℃ [1→2, 1 →2] INPUT 1~9 1. 170℃ 2. 175℃ **3. 180℃** 4. 185℃ 5. 190℃ 6. 195℃ 5. 200℃ 5. 205℃ 6. 210℃ [1→2, 2→2] SETTING : PRESS [→] KEY.			
			(Note) When the adjustment value is "0," the adjustment value returns to the default value "3" (200°C). ↓ [→] KEY ↑			
		Duplex copy fusing temperature adjustment level setting	SIMULATION NO. 43 **[1→1, 2→1]** INPUT (1~5) 1. 190℃ 2. 195℃ **3. 200℃** 4. 205℃ 5. 210℃ [1→2, 1 →2] INPUT 1~9 1. 170℃ 2. 175℃ **3. 180℃** 4. 185℃ 5. 190℃ 6. 195℃ 5. 200℃ 5. 205℃ 6. 210℃ [1→1, 2→1] SETTING : PRESS [→] KEY.			
			(Note) When the adjustment value is "0," the adjustment value returns to the default value: "3" (180°C) for out-side Japan, "7" (200°C) for Japan.			
44			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 44 INPUT 1~9 1. DISABLE/ENABLE PROCESS-CONTROL SETUP. 2. DMS POWER SETUP. 3. IDS POWER SETUP. 4. PROCESS CONTROL DATA BASE ENTRY. 5. (NO PROGRAM) 6. (NO PROGRAM) 7. DMS/IDS SENSOR LEVEL CHECK. 8. (NO PROGRAM) 9. PROCESS CONTROL DATA DISPLAY.			

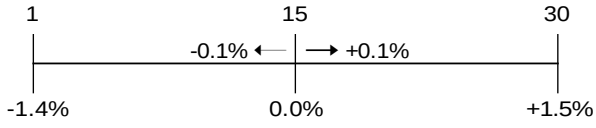
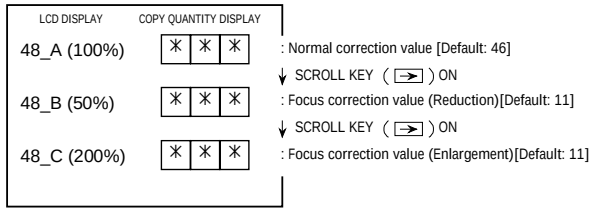
<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td>44</td><td>1</td><td>Process control inhibit/allow setting</td><td>When the sub code is entered, the current setting of process control inhibit/allow is displayed on the copy quantity display. With the RPL on, enter the set value of proces control inhibit/allow with the 10-key and press the START key to store the setting.
SIMULATION NO. 44-1

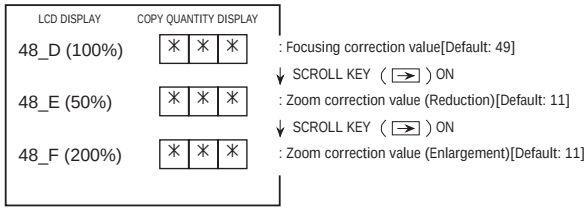
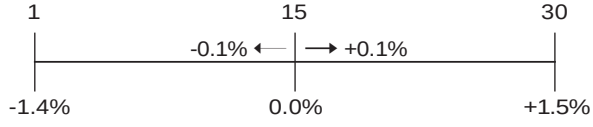
<table>
<tr><th>Set value</th><th>A. Process control correction</th><th>B. Dirt correction</th><th>C. Film wear correction</th><th>D. Toner density correction</th></tr>
<tr><td>0</td><td>○</td><td>×</td><td>×</td><td>×</td></tr>
<tr><td>1</td><td>○</td><td>×</td><td>×</td><td>×</td></tr>
<tr><td>2</td><td>○</td><td>○</td><td>×</td><td>×</td></tr>
<tr><td>3</td><td>○</td><td>○</td><td>×</td><td>×</td></tr>
<tr><td>4</td><td>○</td><td>×</td><td>○</td><td>×</td></tr>
<tr><td>5</td><td>○</td><td>×</td><td>○</td><td>×</td></tr>
<tr><td>6</td><td>○</td><td>○</td><td>○</td><td>×</td></tr>
<tr><td>7</td><td>○</td><td>○</td><td>○</td><td>×</td></tr>
<tr><td>8</td><td>○</td><td>×</td><td>×</td><td>○</td></tr>
<tr><td>9</td><td>○</td><td>×</td><td>×</td><td>○</td></tr>
<tr><td>10</td><td>○</td><td>○</td><td>×</td><td>○</td></tr>
<tr><td>11</td><td>○</td><td>○</td><td>×</td><td>○</td></tr>
<tr><td>12</td><td>○</td><td>×</td><td>○</td><td>○</td></tr>
<tr><td>13</td><td>○</td><td>×</td><td>○</td><td>○</td></tr>
<tr><td>14</td><td>○</td><td>○</td><td>○</td><td>○</td></tr>
<tr><td>15</td><td>○</td><td>○</td><td>○</td><td>○</td></tr>
</table>
○: Enable ×: Inhibit</td><td>15</td><td>1 ~ 5</td><td>—</td></tr>
<tr><td></td><td>2</td><td>Drum marking sensor output adjustment</td><td>When the sub code is entered, the drum rotates and the drum marking sensor level is displayed on the copy quantity display to allow the sensor output adjustment with the variable resistor on the process control PWB in the front side of the machine. (Drum marking sensor output, VR1/VR3; Adjustment value, 123-233)</td><td>—</td><td>170 ±10</td><td>P. 8 – 23</td></tr>
<tr><td></td><td>3</td><td>Process control sensor output adjustment</td><td>When the sub code is entered, the drum rotates and the process control sensor level is displayed on the copy quantity display to allow the sensor output adjustment with the variable resistor on the process control PWB in the front side of the machine. (Process control sensor output, VR2/VR4; adjustment value, 668 ~ 988)</td><td>—</td><td>815 ±15</td><td>P. 8 – 24</td></tr>
<tr><td></td><td>4</td><td>Process control reference value registration</td><td>When the sub code is entered, the density correction value is displayed on the copy quantity display. With the RPL on, enter the density correction data with the 10-key pad and press the START key to store the data.</td><td>Japan: 130
EX : 100</td><td>—</td><td>—</td></tr>
<tr><td></td><td>7</td><td>Process ID/mark sensor LED light quantity check</td><td>When the sub code is entered, the LCD shows the following display to allow checking of the output level of the drum marking sensor and the process control sensor.
SIMULATION NO. 44-7
DMS/IDS SENSOR LEVEL CHECK.
DM . . . . . mmm
ID . . . . . nnn

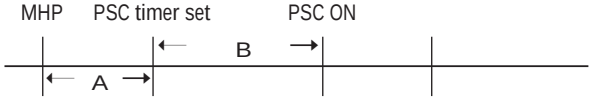
DM: Drum marking sensor output level (Specified range: 123 ~ 233)
ID : Process control sensor output level (Specified range: 668 ~ 998)
If the output level is outside the specified range, execute simulation No. 44-2 (Drum marking sensor output adjustment) or simulation No. 44-3 (Process control sensor output adjustment).</td><td>—</td><td>—</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td>44</td><td>9</td><td>Process control data display</td><td>When the sub code is entered, the LCD shows the following display to allow checking of the output level of the drum marking sensor and the process control sensor.
SIMULATION NO. 44-9
FVGNOM : nnn FVGPHT : nnn FVGTS : nnn
NVGNOM : nnn NVGPHT : nnn NVGTS : nnn
FCLNOM : nnn FCLPHT : nnn FCLTS : nnn
NCLNOM : nnn NCLPHT : nnn NCLTS : nnn
FCLAE : nnn NCLAE : nnn
DVCL : nnn DSENSE : nnn
DMCNT : nnn IDCNT : nnn DMRNCT : nnn
TNRNCT : nnn
<table><tr><td>FVGNOM</td><td>Normal mode grid bias initial value</td></tr><tr><td>FVGPHT</td><td>Photo mode grid bias initial value</td></tr><tr><td>FVGTS</td><td>Toner save mode grid bias initial value</td></tr><tr><td>NVGNOM</td><td>Current normal mode grid bias value</td></tr><tr><td>NVGPHT</td><td>Current photo mode grid bias value</td></tr><tr><td>NVGTS</td><td>Current toner save mode grid bias value</td></tr><tr><td>FCLNOM</td><td>Normal mode copy lamp voltage EXP.1 initial value</td></tr><tr><td>FCLPHT</td><td>Photo mode copy lamp voltage EXP.1 initial value</td></tr><tr><td>FCLTS</td><td>Toner save mode copy lamp voltage EXP.1 initial value</td></tr><tr><td>NCLNOM</td><td>Current normal mode copy lamp voltage EXP.1</td></tr><tr><td>NCLPHT</td><td>Current photo mode copy lamp voltage EXP.1</td></tr><tr><td>NCLTS</td><td>Current toner save mode copy lamp voltage EXP. 1</td></tr><tr><td>FCLAE</td><td>AE mode copy lamp voltage (WH level) initial value</td></tr><tr><td>NCLAE</td><td>Current AE mode copy lamp voltage (WH level)</td></tr><tr><td>DVCL</td><td>Dirt correction reference lamp voltage</td></tr><tr><td>DSENSE</td><td>Dirt correction sensor initial value registered value</td></tr><tr><td>DMCNT</td><td>Marking sensor gain rank</td></tr><tr><td>IDCNT</td><td>Process control sensor gain rank</td></tr><tr><td>DMRNCT</td><td>Film wear correction counter</td></tr><tr><td>TNRNCT</td><td>Toner controller correction counter value</td></tr></table></td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>46</td><td></td><td></td><td>When the START Key is pressed, process control is executed and then the exposure adjustment can be performed. For adjustment procedure, refer to the exposure adjustment (separate sheet).</td><td></td><td></td><td>P. 8 – 20</td></tr>
<tr><td>47</td><td></td><td></td><td>AE sensor output level adjustment.</td><td></td><td></td><td>P. 8 – 20</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
48			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 48 INPUT 1~5 1. FRONT/REAR MAGNI ADJUSTMENT. 2. MAGNI RATIO FINE ADJUSTMENT. 3. LENS SPECIAL. (INPUT) 4. 4/5 MIRROR SPECIAL. (INPUT) 5. MAGNI RATIO FINE ADJUSTMENT. (INPUT)			
	1	Front-rear direction magnification ratio adjustment	When this simulation is executed, the machine starts warming up. At that time, the LCD shows the following display and "48A" (Normal ratio correction data) is displayed on the copy quantity display. SIMULATION NO. 48-1 INPUT_A (26~66) Use the 10-keypad to change the setting. After setting, press the PROGRAM key to store the set value. Press the scroll key ([→]) to scroll the displays on the message display section on the LCD and the copy quantity display as follows: 48B → 48C → 48D → 48E → 48F → 48A → The set value can be stored in the same manner as in "48A." After completion of warming up, copying is allowed. LCD DISPLAY / COPY QUANTITY DISPLAY INPUT_A (26~66) ✳✳✳ : Normal correction value [Default: 46] ↓ SCROLL KEY ([→]) ON INPUT_B (1~21) ✳✳✳ : Focus correction value (Reduction)[Default: 11] ↓ SCROLL KEY ([→]) ON INPUT_C (1~21) ✳✳✳ : Focus correction value (Enlargement)[Default: 11] ↓ SCROLL KEY ([→]) ON INPUT_D (1~97) ✳✳✳ : Focusing correction value[Default: 49] ↓ SCROLL KEY ([→]) ON INPUT_E (1~21) ✳✳✳ : Zoom correction value (Reduction)[Default: 11] ↓ SCROLL KEY ([→]) ON INPUT_F (1~21) ✳✳✳ : Zoom correction value (Enlargement)[Default: 11] Note 1: ( ) shows the input range of adjustment value. Note 2: When the adjustment value is "0," the similar adjustment to the default value is performed.	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	2	Paper transport direction magnification ratio adjustment	When this simulation is executed, the machine starts warming up. At that time, the LCD shows the following display and the current set value of the mirror speed correction data is displayed on the copy quantity display. SIMULATION NO. 48-2 INPUT 1~30 Use the 10-keypad to change the setting. After setting, press the PROGRAM key to store the set value. (1 count = 0.1%) After completion of warming up, copying is allowed. [Adjustment conditions] Adjustment range: –1.4% ~ +1.5% Adjustment value input range: 1 ~ 30 [0.0% when the adjustment value is 15. (Default: 15)]  **Changing rate of scanning speed** (Scan speed change rate) Note: When the adjustment value is "0," the similar adjustment to the default is performed.	15	—	—
	3	Lens characteristics value input	When the sub code is entered, the LCD shows the following display and the currently set value of "48A" (normal correction data) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store the set value. SIMULATION NO. 48-3 > 48A (100%) : **46** 48B (50%) : 11 48C (200%) : 11 Press the scroll key (→) to scroll the displays on the message display section on the LCD and the copy quantity display as follows: 48B → 48C → 48A → 48B → The set value can be stored in the same manner as in "48A."  Note 1: ( ) shows the input range of adjustment value. Note 2: When the adjustment value is "0," the similar adjustment to the default value is performed.	—	—	—

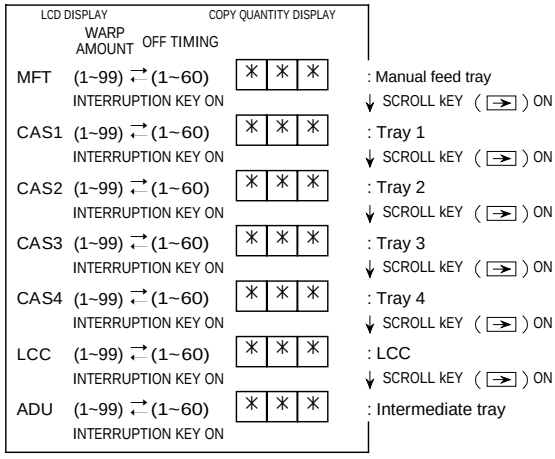
Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	4	No. 4/5 mirror characteristics value input	When the sub code is entered, the LCD shows the following display and the currently set value of "48D" (Focus correction value data) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store the set value. SIMULATION NO. 48-4 > 48D (1~97) : **49** 48E (1~21) : 11 48F (1~21) : 11 Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 48E → 48F → 48D → 48E → The set value can be stored in the same manner as in "48A."  Note 1: ( ) shows the input range of adjustment value. Note 2: When the adjustment value is "0," the similar adjustment to the default value is performed.	—	—	—
	5	Mirror speed correction value input	When the sub code is entered, the LCD shows the following display and the currently set mirror speed correction data is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-keypad to store the value. (1 count = 0.1%) SIMULATION NO. 48-5 [Adjustment conditions] Adjustment range: –1.4% ~ +1.5% Adjustment value input range: 1 ~ 30 [0.0% when the adjustment value is 15. (Default: 15)]  **Changing rate of scanning speed** Note: When the adjustment value is "0," the similar adjustment to the default is performed.	15	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
50			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 50 INPUT 1~4 1. LEAD EDGE, LEAD EDGE VOID AREA ADJUSTMENT. 2. LEAD EDGE ADJUSTMENT. (INPUT) 3. LEAD EDGE/VOID ADJUSTMENT. (INPUT) 4. VOID ADJUSTMENT. (INPUT)			
	1	Lead edge, lead edge void area adjustment	Copy lead edge adjustment When this simulation is executed, the machine starts warming up. SIMULATION NO. 50-1 INPUT_A (0~99) At that time, the LCD shows the following display and the current set value of "50A" (distance between MHP and the image lead edge) is displayed on the copy quantity display. Use the 10-key to set/change the value of "50A" and press the PROGRAM (P) key to store it. Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 50B → 50C → 50D → 50E → 50A → 50B → The set value can be stored or changed in the same manner as in "48A." After completion of warming up, copying is allowed. LCD DISPLAY / COPY QUANTITY DISPLAY INPUT_A (0~99) ✳✳✳ : Distance from MHP to image lead edge (1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_B (0~99) ✳✳✳ : Time data from image lead edge to PSC ON (1 count = 0.5ms) ↓ SCROLL KEY (→) ON INPUT_C (1~20) ✳✳✳ : ↓ SCROLL KEY (→) ON INPUT_D (0~20) ✳✳✳ : Lead edge void amount data (1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_E (0~20) ✳✳✳ : Rear edge void amount data (1 count = 0.47mm) Note 1: ( ) shows the input range of adjustment value. Note 2: When "0" is entered to "50C," the adjustment is similar to that of the default value.  A: 50A data B: 50B data	—	—	P. 8 – 15

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	2	Lead edge adjustment (simple type)	When this simulation is executed, the machine starts warming up and the LCD shows the following display. The currently set value of "50_L1" (Lead edge shift at 200% copy) is displayed on the copy quantity display. SIMULATION NO. 50-2 INPUT_A (0~999) Enter the value of "lead edge shift at 200% copy" with the 10-key pad and press the PROGRAM (P) key to store it. Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 50_L2 → 50C → 50D → 50E → 50_L1 → 50_L2 → The set value can be stored or changed in the same manner as in "50A." After completion of warming up, copying is allowed. LCD DISPLAY / COPY QUANTITY DISPLAY INPUT_L1(0~999) ✳✳✳ : Lead edge shift at 200% copy (L1)(1 count = 0.1mm) ↓ SCROLL KEY (→) ON INPUT_L2(0~999) ✳✳✳ : Lead edge shift at 100% copy (L2)(1 count = 0.1mm) ↓ SCROLL KEY (→) ON INPUT_C (1~20) ✳✳✳ : ↓ SCROLL KEY (→) ON INPUT_D (0~20) ✳✳✳ : Lead edge void amount data(1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_E (0~20) ✳✳✳ : Read edge void amount data (1 count = 0.47mm) Note 1: ( ) shows the input range of adjustment value. Note 2: When "50_L1" is entered, the copy magnification ratio is automatically set to 200%. [Adjustment procedure] 1. Set L1 and L2 to "0." 2. Put a scale on the original table. 3. Make a copy at 200%. 4. Make a copy at 100%. 5. Set the screen to "INPUT_L1" display, and enter the lead edge shift at 200% copy with the 10-key pad. (Example) IN the case of 35.5mm, enter "355." 6. Set the screen to "INPUT_L2" display, and enter the lead edge shift at 100% copy with the 10-key pad. (Example) In the case of 35.5mm, enter "355." 7. Press the START key to make a copy.	—	—	P. 8 – 17
	3	Lead edge adjustment value input	When the sub code is entered, the LCD shows the following display and the currently set value of "50A" (distance between MHP to the image lead edge) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. SIMULATION NO. 50-3 INPUT_D (0~99) Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 50B → 50C → 50D → 50E → 50A → 50B → The set value can be stored or changed in the same manner as in "50A."	—	—	—

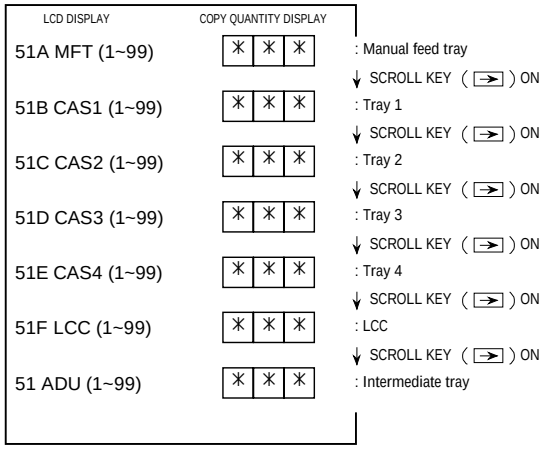
Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			LCD DISPLAY / COPY QUANTITY DISPLAY INPUT_A (0~99) ✳✳✳ : Distance from MHP to image lead edge (1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_B (0~99) ✳✳✳ : Time data from image lead edge to PSC ON (1 count = 0.5ms) ↓ SCROLL KEY (→) ON INPUT_C (1~20) ✳✳✳ : ↓ SCROLL KEY (→) ON INPUT_D (0~20) ✳✳✳ : Lead edge void amount data(1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_E (0~20) ✳✳✳ : Read edge void amount data (1 count = 0.47mm) Note 1: ( ) shows the input range of adjustment value. Note 2: When "0" is entered to "50C," the adjustment is similar to that of "10."			
	4	Void adjustment value input	When the sub code is entered, the LCD shows the following display and the currently set value of "50D" (lead edge void amount) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. SIMULATION NO. 50-4 INPUT_D (0~20) Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 50E → 50D → 50E → The set value can be stored or changed in the same manner as in "50D." LCD DISPLAY / COPY QUANTITY DISPLAY INPUT_D (0~20) ✳✳✳ : Lead edge void amount data (1 count = 0.47mm) ↓ SCROLL KEY (→) ON INPUT_E (0~20) ✳✳✳ : Rear edge void amount data (1 count = 0.47mm) ↓ SCROLL KEY (→) ON Note 1: ( ) shows the input range of adjustment value.	—	—	—
51			When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 51 INPUT 1~6 1. PSPS TIMING ADJUSTMENT. 2. RRC PAPER BUCKLE ADJUSTMENT. 3. RRC PAPER BUCKLE ADJUSTMENT. (INPUT) 4. TRC2H OFF TIMING ADJUSTMENT. (INPUT) 5. RRC PAPER BUCKLE REVISION. (BYPASS TRAY; 5.5 × 8.5, A5) 6. RRC PAPER BUCKLE REVISION. (INPUT) (BYPASS TRAY; 5.5 × 8.5, A5)			

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	1	Separation pawl timing adjustment	When the sub code is entered, the LCD shows the following display and the currently set value of the separation pawl timing is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. SIMULATION NO. 51-1 INPUT PSPS TIMING. (0~20) The adjustment value of "the separation pawl ON timing after RRC ON" can be set or changed with the 10-key pad. After entering the set value, press the START key to store it. (1 count = 10ms)	—	—	—
	2	Resist amount adjustment	When this simulation is executed, the machine starts warming up and the LCD shows the following display. The currently set value of "51A" (RRC front warp amount in manual paper feed) is displayed on the copy quantity display. When the interruption key is pressed, the interruption lamp lights up and the set value of "TRC2H OFF timing" is displayed on the copy quantity display to allow entering/changing of the set value in the same manner as above. When the interruption key is pressed again, the screen returns to the "RRC front warp amount" adjustment. SIMULATION NO. 51-2 RRC PAPER BUCKLE ADJUSTMENT. INPUT MFT DATA (1~99) → Interruption lamp OFF ↓ (Interruption key ON) ↑ SIMULATION NO. 51-2 BRAKE CLUTCH TIMER SET. INPUT MFT DATA (1~60) → Interruption lamp ON Press the scroll key to scroll the LCD message and the copy quantity display as follows: Tray 1 → Tray 2 → Tray 3 → Tray 4 → LCC → ADU → Manual feed → Tray 1 → When each value is displayed, it can be changed with the 10-key pad. After entering the set value, press the PROGRAM key to store it. The adjustment value of RRC front warp amount is in the range of 1 ~ 99 for each tray. The greater the set value is, the greater the warp amount is. (1 count = 0.36mm; Default value, manual = 75, tray 1 ~ 4 = 70, LCC = 75, ADU = 70) TRCH2 OFF timing can be set from PPD3 ON to TRC2H OFF for each tray in the range of adjustment value 1 ~ 60. The greater the adjustment value is, the loner the time to OFF is. (1 count = 1ms, default = 16)	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			After completion of warming up, copying is allowed.  Note 1: ( ) shows the input range of adjustment value. Note 2: When the adjustment value is set to "0," the adjustment is similar to that of the default value.			
	3	Resist amount adjustment value input	When the sub code is entered, the LCD shows the following display and the currently set value of "51A" (RRC front warp amount in manual paper feed) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. SIMULATION NO. 51-3 RRC PAPER BUCKLE ADJUSTMENT. > 51A (1~99) : **46** [MFT] 51B (1~99) : 46 [TRAY1] 51C (1~99) : 46 [TRAY2] 51D (1~99) : 46 [TRAY3] 51E (1~99) : 46 [TRAY4] 51F (1~99) : 46 [LCC] 51F (1~99) : 46 [ADU] Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 51B → 51C → 51D → 51E → 51F → 51G → 51A → The set value can be stored or changed in the same manner as in "51A." The RRC front warp amount van be adjusted in the range of 1 ~ 99 for each tray. The greater the adjustment value is, the greater the warp amount is, and vice versa. (1 count = 0.36mm; Default value, manual feed = 75, tray 1 ~ 4 = 70, LCC = 75, ADU = 70)	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
			LCD DISPLAY / COPY QUANTITY DISPLAY 51A MFT (1~99) ✳✳✳ : Manual feed tray ↓ SCROLL KEY (→) ON 51B CAS1 (1~99) ✳✳✳ : Tray 1 ↓ SCROLL KEY (→) ON 51C CAS2 (1~99) ✳✳✳ : Tray 2 ↓ SCROLL KEY (→) ON 51D CAS3 (1~99) ✳✳✳ : Tray 3 ↓ SCROLL KEY (→) ON 51E CAS4 (1~99) ✳✳✳ : Tray 4 ↓ SCROLL KEY (→) ON 51F LCC (1~99) ✳✳✳ : LCC ↓ SCROLL KEY (→) ON 51 ADU (1~99) ✳✳✳ : Intermediate tray Note 1: ( ) shows the input range of adjustment value. Note 2: When the adjustment value is set to "0," the adjustment is similar to that of the default value.			
	4	TRC2H OFF timing setting	When the sub code is entered, the LCD shows the following display and the currently set value of "51A" (TRC2H OFF timing setting) is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. SIMULATION NO. 51-4 RRC PAPER BUCKLE ADJUSTMENT. > 51A (1~99) : **46** [MFT] 51B (1~99) : 46 [TRAY1] 51C (1~99) : 46 [TRAY2] 51D (1~99) : 46 [TRAY3] 51E (1~99) : 46 [TRAY4] 51F (1~99) : 46 [LCC] 51F (1~99) : 46 [ADU] Press the scroll key (→) to scroll the message display on the LCD and the copy quantity display as follows: 51B → 51C → 51D → 51E → 51F → 51G → 51A → The set value can be stored or changed in the same manner as in "51A." The RRC front warp amount van be adjusted in the range of 1 ~ 99 for each tray. The greater the adjustment value is, the greater the warp amount is, and vice versa. (1 count = 0.36mm; Default value = 46)	—	—	—

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	



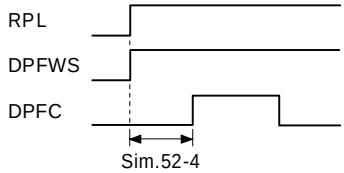
Note 1: ( ) shows the input range of adjustment value.
Note 2: When the adjustment value is set to "0," the adjustment is similar to that of the default value.

When this simulation is executed, the machine goes into warm-up state. At this time, the LCD shows the following message. The correction value of RRC front warp quantity in manual paper feed of small size paper is displayed on the copy quantity display.

SIMULATION NO. 51-5
RRC PAPER BUCKLE REVISION.
(BYPASS TRAY;5.5×8.5, A5)
INPUT DATA. (0~20)

At this time, the correction value of RRC front warp quantity in manual paper feed of small size paper can be entered (changed). After entering the value, press the PROGRAM ON key to store it.
When the warm up is completed, copying ca be made.

52			(Simulation No. 51) When the sub code "6" is entered, the LCD shows the following display. The currently set value (the correction value) of RRC front warp amount in manual paper feed of small size paper is displayed on the copy quantity display. When the RPL is on, enter the correction value and press the PRINT switch to store it. SIMULATION NO. 51-6 RRC PAPER BUCKLE REVISION. (BYPASS TRAY;5.5×8.5, A5) INPUT DATA. (0~20) When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display. With the RPL on, enter the desired sub code and press the START key to start the operation. SIMULATION NO. 52 INPUT 1~2 1. DUPLEX WIDTH GUIDE ADJUSTMENT. 2. DUPLEX BACH STOP GUIDE ADJUSTMENT. 3. (NO PROGRAM) 4. ADU PAPER FEED TIMING			

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
	1	Duplex width guide adjustment	When the sub code is entered, the LCD shows the following display and the currently set value of the intermediate tray alignment plate adjustment value is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. The alignment plate will move to 8.5" x 11" size if the destination is "INCH," and to A4 size if the destination is "AB." "50" is the reference value of the set value. If the set value is greater than 50, the alignment plate width becomes smaller. IF smaller than 50, the alignment plate width becomes greater. (1 count = 0.57mm) SIMULATION NO. 52-1 DUPLEX WIDTH GUIDE ADJUSTMENT. INPUT DATA. (1~99) ∗ When the set value is "0," the adjustment is the same as that of "50."	—	—	—
	2	Duplex bach stop guide adjustment	When the sub code is entered, the LCD shows the following display and the currently set value of the intermediate tray rear plate adjustment value is displayed on the copy quantity display. With the RPL on, enter the set value with the 10-key pad and press the START key to store it. The alignment plate will move to 8.5" x 11" size if the destination is "INCH," and to A4 size if the destination is "AB." "50" is the reference value of the set value. If the set value is greater than 50, the rear plate goes apart from the home position. If smaller than 50, the rear plate comes to the home position. (1 count = 0.57mm) SIMULATION NO. 52-2 DUPLEX BACH STOP GUIDE ADJUSTMENT. INPUT DATA. (1~99) ∗ When the set value is "0," the adjustment is the same as that of "50."			
	4	ADU paper holding time adjustment	When sub code "4" is entered, the LCD shows the following display, and the currently set adjustment value of "DPFWS ON – PRFC ON" time in ADU paper feed is displayed on the copy quantity display. When the RPL is ON, enter the set value with the 10-key pad and press the START key to store it. The default value is "35", and 1 count corresponds to 10msec. SIMULATION NO. 52-4 ADU PAPER FEED TIMING. INPUT DATA. (1~99)  Sim.52-4			

<table>
<tr><th rowspan="2">Main code</th><th rowspan="2">Sub code</th><th rowspan="2">Item</th><th rowspan="2">Contents</th><th colspan="2">Adjustment value</th><th rowspan="2">Ref. page</th></tr>
<tr><th>Default</th><th>Adjustment scope</th></tr>
<tr><td>53</td><td></td><td></td><td>When the main code is inputted, the LCD shows the following display and a sub code blinks on the copy quantity display.
With the RPL on, enter the desired sub code and press the START key to start the operation.
SIMULATION NO. 53
01~04: ORIGINAL STOP POINT SETUP.
<table>
<tr><th></th><th>NOM ☐</th><th>THIN ☐</th><th>SIMP</th><th>DUP</th></tr>
<tr><td>1</td><td>∗</td><td></td><td>∗</td><td></td></tr>
<tr><td>2</td><td>∗</td><td></td><td></td><td>∗</td></tr>
<tr><td>3</td><td></td><td>∗</td><td>∗</td><td></td></tr>
<tr><td>4</td><td></td><td>∗</td><td></td><td>∗</td></tr>
</table>
05~06: (NO PROGRAM)
07~10: RADF SENSOR ADJUSTMENT.
07. REGIST 08. TIMING 09. EXIT/REVERSAL
10. EMPTY</td><td></td><td></td><td></td></tr>
<tr><td></td><td>1</td><td>Original stop position adjustment</td><td>Used to adjust the original (normal paper) stop position in the RADF in the single copy mode.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>2</td><td>Original stop position adjustment</td><td>Used to adjust the original (normal paper) stop position in the RADF in the duplex copy mode.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>3</td><td>Original stop position adjustment</td><td>Used to adjust the original (thin paper) stop position in the RADF in the single copy mode.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>4</td><td>Original stop position adjustment</td><td>Used to adjust the original (thin paper) stop position in the RADF in the duplex copy mode.
When this simulation is executed, the RPL lights up and the currently set adjustment value is displayed on the copy quantity display. Enter the set value with the 10-key pad and press the START key to store it.
The adjustment value range is 0 ~ 15. With "8" as the reference value, if the adjustment value is smaller than the reference value, the stop position comes to the paper feed side. If the adjustment value is greater than the reference value, the stop position comes to the paper exit side.
<table>
<tr><th>Adjustment value</th><th>Adjustment value</th><th></th></tr>
<tr><td>0</td><td>–8.000mm</td><td rowspan="8">Paper feed side</td></tr>
<tr><td>1</td><td>–7.000mm</td></tr>
<tr><td>2</td><td>–6.000mm</td></tr>
<tr><td>3</td><td>–5.000mm</td></tr>
<tr><td>4</td><td>–4.000mm</td></tr>
<tr><td>5</td><td>–3.000mm</td></tr>
<tr><td>6</td><td>–2.000mm</td></tr>
<tr><td>7</td><td>–1.000mm</td></tr>
<tr><td>8</td><td>0.0 (Reference)</td><td rowspan="8">Paper exit side</td></tr>
<tr><td>9</td><td>+1.000mm</td></tr>
<tr><td>10</td><td>+2.000mm</td></tr>
<tr><td>11</td><td>+3.000mm</td></tr>
<tr><td>12</td><td>+4.000mm</td></tr>
<tr><td>13</td><td>+5.000mm</td></tr>
<tr><td>14</td><td>+6.000mm</td></tr>
<tr><td>15</td><td>+7.000mm</td></tr>
</table>
(Reference: Adjustment value =8)</td><td></td><td></td><td></td></tr>
<tr><td></td><td>7</td><td>RADF resist sensor adjustment</td><td>Used to adjust the threshold value of the RADF resist sensor sensing level.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>8</td><td>RADF timing sensor adjustment</td><td>Used to adjust the threshold value of the RADF timing sensor sensing level.</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>9</td><td>RADF paper exit sensor adjustment</td><td>Used to adjust the threshold value of the RADF paper exit sensor sensing level.</td><td>—</td><td>—</td><td>—</td></tr>
</table>

Main code	Sub code	Item	Contents	Adjustment value		Ref. page
				Default	Adjustment scope	
53	10	RADF empty sensor adjustment	Used to adjust the threshold value of the RADF empty sensor sensing level. When this simulation is executed, the RADF adjusts the threshold value of the sensor sensing level automatically. After completion of the adjustment, the adjustment value is displayed on the copy quantity display. The relationship between the adjustment value and the threshold value is expressed in the following formula. Adjustment value = $\frac{255}{5.0} \times$ (Threshold level voltage [V])	—	—	—

Machine trouble codes

Trouble code	Trouble name	Sub code	Content of trouble
L1	Mirror feed	00	After the mirror starts feeding, it does not complete feeding in the specified time.
L3	Mirror base return trouble	00	After the mirror base starts initializing, or during copying, it does not complete returning in the specified time.
L4	Main motor system trouble	01	Drum motor lock (in the process system)
		02	Main motor lock (in the transport system)
L5	Lens/No. 4/5 mirror motor system trouble	00	Between the master and the mirror controller, the lens/No. 4/5 mirror does not complete the operation in the specified time.
H2	Fuser trouble	00	Thermistor open detected.
H3	Fuser trouble	00	Abnormally high temperature is detected in the heat roller.
H4	Fuser trouble	00	After the power relay is turned on, the temperature does not reach the specified level in the specified time. Abnormally low temperature detected.
U0	Operation panel trouble	00	Communication trouble between the master and the operation panel. (Master judgement)
U2	EEPROM trouble	00	Check sum error in the counter memorized in the EEPROM
U3	Mirror motor controller trouble	00	Communication trouble between the master and the mirror controller
		20	Abnormal drive of the mirror motor
		21	Abnormal mirror home position detected.
		26	Mirror motor power voltage fall
		41	When the lens motor home position is corrected, there is a shift exceeding the allowable steps.
		42	When the No. 4/5 mirror motor home position is corrected, there is a shift exceeding the allowable steps.
U7	PC/MODEM system trouble	00	Communication trouble between the PPC and the PC/MODEM.
F1	Sorter/staple sorter trouble	00	Communication trouble between the master and the sorter/staple sorter.
		02	Transport motor trouble (staple sorter)
		03	Guide bar oscillation motor trouble (staple sorter)
		06	Shift motor trouble (staple sorter)
		08	Staple shift motor trouble (staple sorter)
		10	Staple unit operation trouble (staple sorter)
F2	Process system trouble	00	Toner control sensor open
		31*1	Abnormality in the photoconductor surface reflecting rate
		37*1	Drum marking senor gain adjustment trouble

PPC communication codes in the trouble mode

Trouble code	Trouble name	Sub code	Content of trouble
U4	ADU trouble	02	ADU alignment plate home position detection trouble
		03	ADU rear plate home position detection trouble
U5	RADF trouble	00	Communication rouble between the RADF and the machine
		01	Resist sensor trouble
		02	Paper reverse sensor trouble
		03	Timing sensor trouble
		04	Empty sensor trouble
		11	Paper feed motor trouble
		12	Transport belt motor trouble
L8	AE trouble	01	Full wave signal absence
		02	Full wave signal width abnormality
F1	Sorter/staple sorter trouble	04	Indexer lower limit detected.
		05	Indexer upper limit detected.
		06	Indexer motor trouble
		10	Stapler clogging/trouble (staple sorter only)
F2	Process system trouble	31	Photoconductor surface reflecting rate abnormality
		32	Drum marking scanning abnormality
		33	The grid voltage exceeds the upper or lower limit.
		35	In the patch measurement mode, the measured value exceeds the allowable range.
		37	Drum marking sensor gain adjustment trouble
F3	Tray trouble	01	LCC PT disc trouble
		02	LCC ascending trouble
		03	LCC descending trouble
		12	Tray 1 ascending trouble
		22	Tray 2 ascending trouble
		32	Tray 3 ascending trouble
		42	Tray 4 ascending trouble

Trouble codes during execution of simulation

Trouble code	Trouble name	Sub code	Content of trouble
EE	Automatic developer adjustment	EU	Sensor level input abnormality (under toner)
		EL	Sensor level input abnormality (over toner)
L2	Mirror motor system trouble	00	RRC operation trouble
L8	AE system trouble	01	Full wave signal absence
		02	Full wave signal width abnormality
		03	AE output does not change.
U5	RADF trouble	00	Communication trouble between RADF and the machine.
		01	Resist sensor trouble
		02	Paper reverse sensor trouble
		03	Timing sensor trouble
		04	Empty sensor trouble
		11	Paper feed motor trouble
		12	Transport belt motor trouble
CC	OC original detection	nn*1	Original photo sensor trouble

∗ 1: Sub code shows the trouble position.

Codes other than trouble

Trouble code	Trouble name	Sub code	Content of trouble
CH (Light)	Door open	—	The door switch is OFF.
CH (Blink)	DV unit trouble	—	The DV unit is not installed, the connector is not connected.
PC	Card counter trouble	—	In the case of the card counter model, the card counter is not installed.
– – –	Auditor trouble	—	The auditor is set, but is in ready state.
PF	PC/MODEM trouble	—	In the model with PC/MODEM installed, the copy inhibit command from the host is received.

[10] MAINTENANCE

✕ Check ○ Clean ▲ Replace ☐ Shift position △ Adjust ☆ Lubricate

Unit	Part name	100K	200K	300K	400K	Remark
Process	Drum	✕	▲	✕	▲	
	Cleaner blade	▲	▲	▲	▲	
	Toner reception seal	○	▲	○	▲	
	Cleaner seal	○	▲	○	▲	
	Charging plate unit (saw teeth)	○	▲	○	▲	
	Screen grid	○	▲	○	▲	
	MC case	○	○	○	○	
	Drum separation pawl	○	▲	○	▲	
	Blank lamp	○	○	○	○	
	Discharge lamp	○	○	○	○	
	Charger case	○	○	○	○	
	Density sensor	○	○	○	○	
	Drum mark sensor	○	○	○	○	
	TC wire	○	▲	○	▲	
	TC case	○	○	○	○	
Developing	Developer	▲	▲	▲	▲	
	DV seal	○	○	○	▲	
	DSD collar	○	○	○	▲	
	DV side seal	○	○	○	▲	
Fusing	Upper heat roller	✕	○	✕	▲	
	Lower heat roller	✕	▲	✕	▲	
	Upper cleaning roller	▲	▲	▲	▲	
	Lower cleaning roller	▲	▲	▲	▲	
	Upper separation pawl	☐	▲	☐	▲	
	Lower separation pawl	☐	▲	☐	▲	
	Thermistor	○	▲	○	▲	
	Heat roller gear	✕	○	✕	▲	
Optical	Mirror/lens/reflector/sensors	○	○	○	○	
	Table glass/dust-proof glass	○	○	○	○	
	CL lead wire				▲	
	Rails	✕	☆	✕	☆	
	Copy lamp	✕	▲	✕	▲	
Ozone filter/filter		✕	○	✕	▲	
Paper feed	∗ Pick-up roller	○	▲	○	▲	
	∗ Paper feed roller	○	▲	○	▲	
	∗ Reversing roller	○	▲	○	▲	
	∗ Torque limiter				▲	
ADU	∗ Paper feed roller	○	▲	○	▲	
	Reversing roller	○	▲	○	▲	
	∗ Paper entry roller	○	▲	○	▲	
	∗ Torque limiter		✕		✕	
Suction	Suction belt	○	○	○	○	
Transport	PS follower roller	○	○	○	○	
	Transport roller	○	○	○	○	
	Transport paper guide		○		○	
	Transport system sensor		✕		✕	
Drive	Gear (specified gears only)		☆		☆	
	Belts		✕		✕	
Image		△	△	△	△	
Waste toner	Waste toner bottle	▲	▲	▲	▲	
LCC	∗ Paper feed roller	○	▲	○	▲	
	∗ Reversing roller	○	▲	○	▲	
	∗ Paper entry roller	○	▲	○	▲	
	∗ Torque limiter				▲	
	Drive section gears		☆		☆	
	Paper guide		○		○	
	Sensors		✕		✕	

(Note) For the parts marked with "∗," perform maintenance when the counter of that unit reaches the specified count. (Check with Sim. 22-01.)

Key operator program list

Code	Program name	Function	Page No.
P10	Auditing Mode	Enables or disables the basic auditing mode for copier access.	6
P11	Copies by Account	Displays the total number of copies made against account numbers.	6
P13	Billing Clear Mode	Clears all audit accounts or selectively clears individual accounts.	6
P14	Account Number Control	Enters account numbers, clears account numbers, changes an account number, or displays all assigned account numbers.	7
P16	Account Limit Setting	Sets the maximum number of copies which can be made against an assigned account number.	9
P18	Account Number Security	Guards against trial and error entering of audit account numbers.	10
P19	Key Operator Code Number Change	Changes the Key Operator Code Number.	10
P20	Auto Exposure Adjust	Lightens or darkens copies in the automatic exposure mode.	11
P21	Auto Power Shut-off Timer	Activates and sets a time interval after which the copier automatically turns off.	11
P22	Toner Save Mode	Reduces toner consumption.	11
P23	Auto Clear Setting	Sets a time interval after which the copier returns to the initial settings.	12
P24	Add or Change Extra Presets	Adds or changes reduction and enlargement preset copy ratios.	12
P25	Limit of Maximum Copies Selected	Sets the limit of maximum number of copies to be selected.	13
P26	Initial Margin Shift Setting	Sets the initial margin shift values.	13
P27	Erase Width Adjustment	Sets the amount of the erase area.	13
P28	Initial Status Setting	Sets the copier's initial settings in the ready condition.	14
P29	Total Copy Count	Recalls the total copy counts of the copier, document feeder, duplex section, and staple sorter.	14
P31	Preheat Mode setting	Set the time that elapses before the copier enters the preheat mode after copying is completed.	15
P42	Right/Left Shift Direction Selection	Determines whether shift direction change is to be allowed.	15
P43	Erase Mode Selection	Sets the initial mode for erase function.	15
P44	Restrict Storage of Inserts in Job Program Memory	Prevents insert pages from being stored in job memory.	16
P45	Message Time Setting	Sets the length of time that messages are displayed.	16
P46	Disable Operation	Prevents the copier from being started by people other than key operator.	16
P47	Stream Feeding Mode	Enables the stream feeding mode for copying from the document feeder.	16
P70	Disabling of Auto Paper Selection	Prevents automatic paper selection.	17
P71	Disabling of Auto Tray Switching	Prevents automatic switching between the paper trays.	17
P72	Bypass-Tray Prohibited in Duplex Copy	Prohibits the use of the bypass tray during duplex copying.	17
P73	Disabling of Job Program Changing	Prevents stored programs from being altered.	18
P74	Disabling of Document Feeder	Prevents the use of the document feeder when it malfunctions.	18
P75	Disabling of Duplex Copying	Temporarily prevents the duplex system from operating when it malfunctions. Allows the use of the copier but not the duplex system.	18
P76	Disabling of Stapler	Prevents damage to the stapler while awaiting repair service. (The staple sorter is optional.)	19
P77	Disabling of Covers and Inserts	Prevents the selection of COVERS/INSERTS mode.	19
P83	PC/Modem Access	Provides access to key operator programs through a PC/modem without keyoperator code entry. (Remote access to key operator programs can be performed only when a computer or other equipment is connected to the copier directly or through a telephone line.)	19
P90	Display the List of All P Codes	Sequentially displays all available programs.	20